CIO

THE RESOURCE FOR INFORMATION EXECUTIVES

Special Issue

The MONEY Issue

The CIO's Essential Guide To The Heart Of Business

Financial Concepts Every CIO Must Know
Page 22

Inside an IT Audit
Page 28

Tips from the Budget Masters
Page 38

Improving the CIO-CFO Dialogue
Page 44

How to Talk to Wall Street Investors and Analysts
Page 50

PLUS

Where to Get the Knowledge You Need – Resources, Training and Education
Page 60

The End Page: Four Skewed Views on Matters Monetary
Page 64

FALL/WINTER 2004 · $9.00 cio.com

Hybrid is as hybrid does. And when it comes to IP Communications, hybrid doesn't do much more than compromise. Hybrid doesn't do seamless failover. Doesn't do scalability. Doesn't do end-to-end security. Ditto for remote upgrades. So if it's a car, go hybrid.

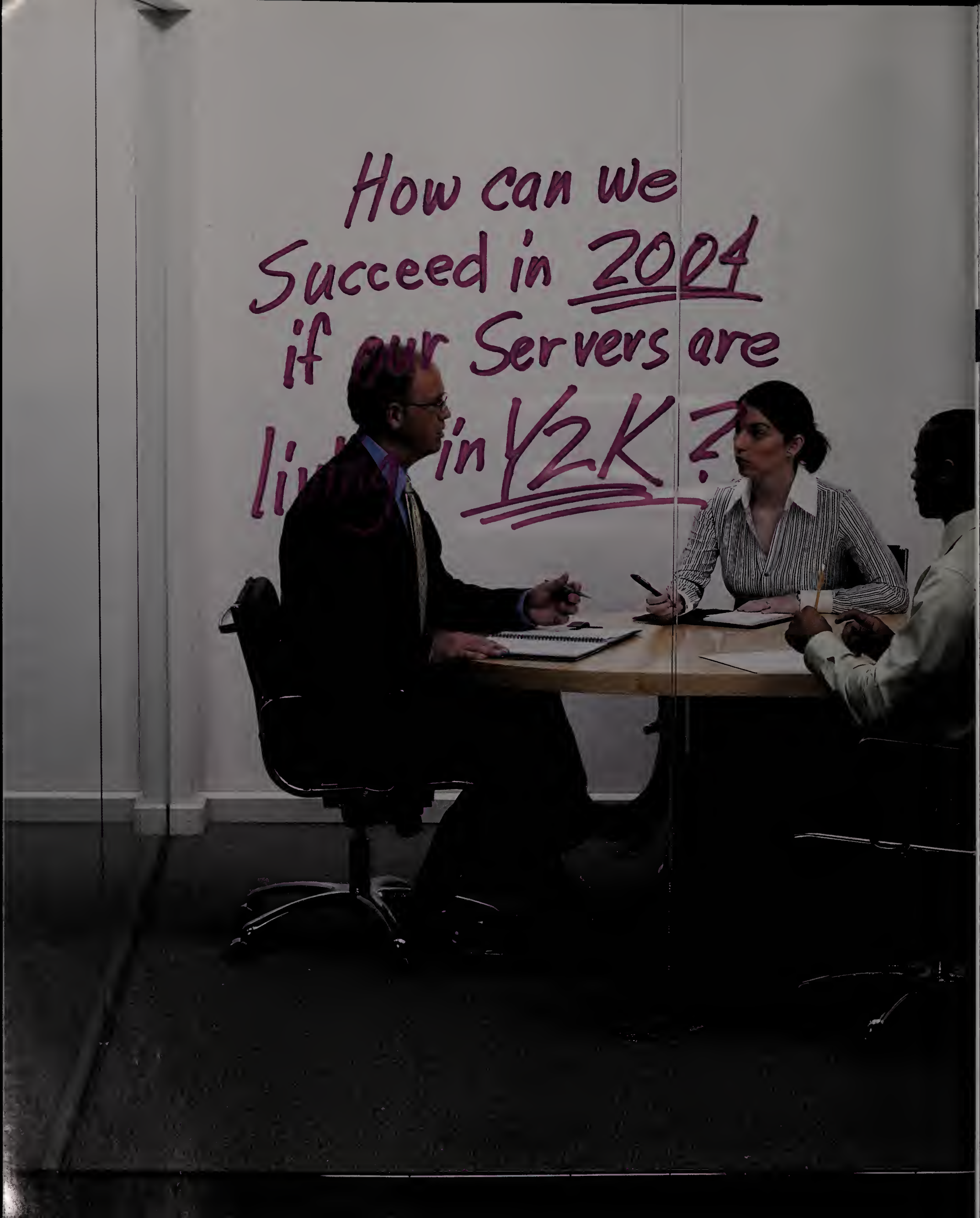
BECAUSE HYBRID IS ACTUALLY NOT A SOLUTION. (EXCEPT FOR CARS.)

But if it's a networking and communications strategy you're driving, make sure you drive the integrated, secure, end-to-end solution: **CISCO IP COMMUNICATIONS. BECAUSE PHONES CAN DO MORE.** Learn more at www.cisco.com/domore.

CISCO SYSTEMS

THIS IS THE POWER OF THE NETWORK. NOW.

©2004 Cisco Systems, Inc. All rights reserved. Cisco, Cisco Systems, Cisco IOS, and the Cisco Systems logo are registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries.


How can we
Succeed in 2004
if our Servers are
in Y2K ?

YOU KNOW BETTER.
DELL KNOWS HOW.

INTRODUCING DELL'S NEW POWEREDGE™ SERVERS.

Get outstanding performance and value with new Dell PowerEdge Servers and Intel® Xeon™ Processors.

- Step up to the next generation of technology with Intel® Xeon™ Processors.
- Get 32-bit performance and the flexibility of 64-bit extended memory* when you need it.
- New OpenManage™ 4 delivers a broad range of remote management features that help reduce complexity.
- Common drivers, BIOS and system images can help you streamline improvements and lower total cost of ownership.
- Things have changed since Y2K. How about your servers?

▶ **PowerEdge 2800** High availability tower, ideal for 1st and 2nd tier server workloads. Coming soon.

▼ **PowerEdge 1850** Exceptional performance server, ideal for HPCC, web and network infrastructure workloads.

▲ **PowerEdge 2850** The perfect balance of performance and flexibility, ideal for database and Internet infrastructure workloads.

Today's way to build a scalable enterprise. Easy as DELL™

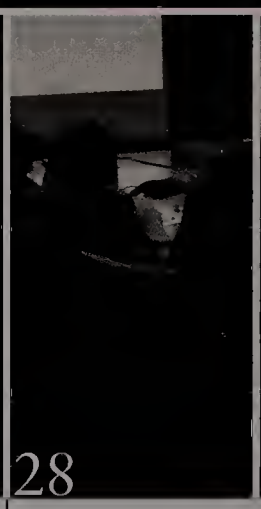
Contact a Dell Professional today. 1-800-846-9233 • www.dell.com/server36

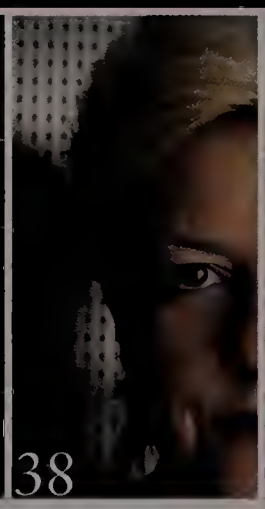
* Requires 64-bit operating system and application. Dell, the Dell logo, PowerEdge and OpenManage are trademarks of Dell Inc. Intel, Intel Inside, the Intel Inside Logo and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2004 Dell Inc. All rights reserved.

CIO

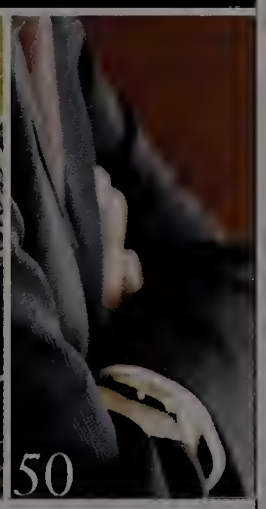
The MONEY Issue

The CIO's Essential Guide to the Heart of Business


28


38

56


50

The Final Frontier for CIOs | 21
You've mastered the technology, the regulations, the relationships. There's just one frontier left: the money. You have to understand where it comes from, where it goes and what happens to it along the way. *By Michael Goldberg*

What CIOs Need to Know About Money | 22
Equal partnership with your enterprise's business leaders is not a matter of saving a nickel here, amortizing an investment there. It's about knowing the language of business and how to enhance the company's value. *By Kim Girard*

Inside an IT Audit | 28
When Sheila Beauchesne started her new job as CIO at a Florida real estate and resort company, she wanted to set IT goals and win the confidence of her executive colleagues. To do that, she needed to know how her costs stacked up against other organizations'. So she called in the IT auditors. *By Meridith Levinson*

Tips from the Budget Masters | 38
Assembling a budget? Keeping it balanced? That's just the beginning. Three CIOs talk about using the budgeting process as a management tool to make their organizations successful. *By Stephanie Overby*

The Dollar Dialogues | 44
Wherein an imaginary dialogue between a CIO and a CFO identifies, analyzes and suggests strategies to resolve the long-standing divide between money and technology. *By Scott Berinato*

Talking to Wall Street | 50
CIOs have a vested interest in getting to know the money people who cover their companies. Verizon CIO Shaygan Kheradpir has learned that knowing what to say to financial analysts can help boost a company's fortunes—and a CIO's career. *By Meridith Levinson*

Oracle Application Server

"Oracle Portal is a powerhouse"

***Network Computing*, 5/13/04**

	Oracle AS 10*g* Portal	IBM WebSphere Portal 5.0	Microsoft Office Share Point Portal Server 2003	BEA WebLogic Portal 8.1
Customization (35%)				
Development framework (20%)	5	3	3	3
User personalization (15%)	4	4	4	2
Integration (30%)				
Collaboration/productivity (10%)	4	4	4	4
Prebuilt integration (10%)	4	4	4	4
Identity management (5%)	4	4	4	4
Search/document management (5%)	4	4	4	4
Architecture (20%)				
Framework (5%)	4	4	4	4
Implementation (5%)	4	4	4	4
Manageability (5%)	4	4	4	4
Standards (5%)	4	4	4	4
Security Features (10%)	4	3	3	2
Price (5%)	5	3	5	4
TOTAL SCORE (100%) Total scores and weighted scores are based on a scale of 0-5.	**4.25**	**3.45**	**3.40**	**2.70**

Oracle Application Server Portal 10*g*
Winner of the 2004 Network Computing Editor's Choice Award

ORACLE®

Network Computing Editor's Choice

oracle.com/portal
or call 1.800.633.0759

Source: Network Computing, 5/13/04, Well-Connected Awards, p. 92

Copyright © 2004, Oracle. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

CIO

The MONEY Issue (cont.)

20 Thoughts About Money | 56
Including a few facts, several famous quotations, a couple of anecdotes and one conclusion. *By David Rosenbaum*

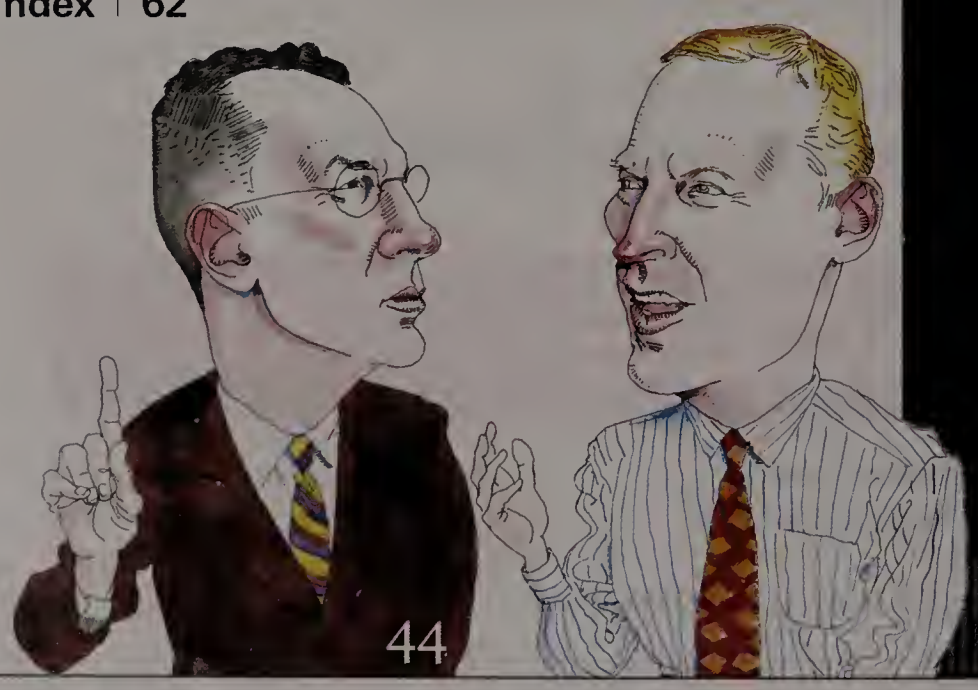
Accounting and Finance Resources | 60
Where you can go for courses, readings, rulings and online resources to cement the lessons in this issue. *By Carol Zarrow*

Funny Money | 64
Four skewed views on matters monetary.

Plus

Trendlines | 15
Hired guns, finance-style; Support efforts for the CIO-CFO relationship; Games test business acumen; Taking the tension out of meetings.

Index | 62



Online Features

JUST SCRATCHING THE FINANCIAL SURFACE

Our goal to make you more money-savvy only starts here—the adventure continues online. The courses and websites mentioned in Accounting and Finance Resources (Page 60) have live links online to whisk you to wisdom. In addition, the online versions of What CIOs Need to Know About Money (Page 22) and Inside an IT Audit (Page 28) have further resources for you to use. Just go to *www.cio.com/money*, but...

YOU'LL HAVE TO REGISTER (Don't worry—it's free.)

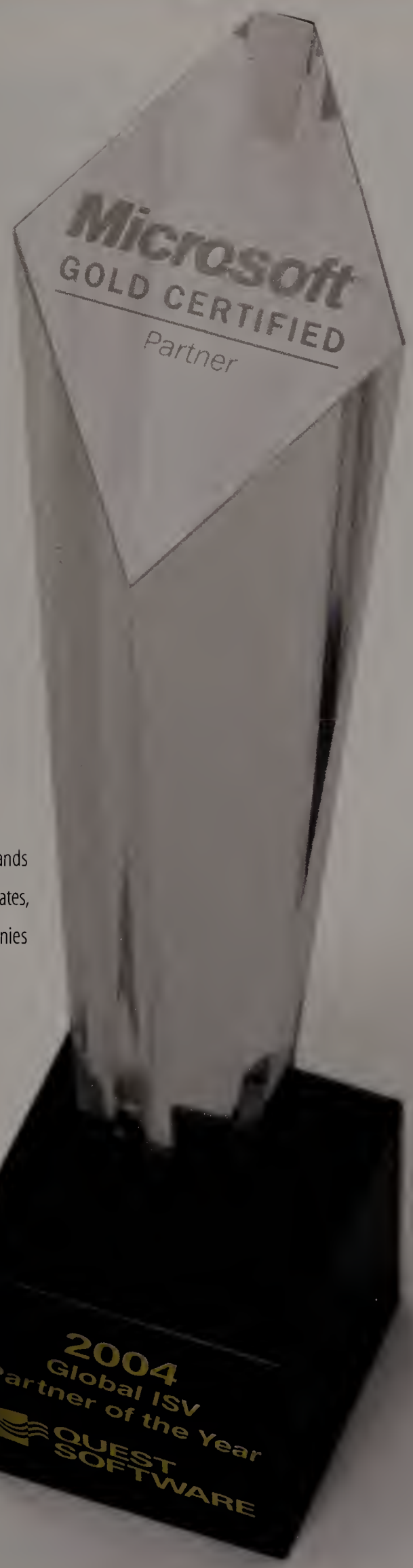
The online version of *CIO*'s Special Money Issue requires that you take just a few moments to register. Although we know that many *CIO* print readers use the extra resources of CIO.com, we are always looking for ways to improve what we offer. By registering, you'll have access to:

- All the content and online resources of the Money Issue
- Upcoming CIO.com site benefits and member exclusives
- All the membership sites of the IDG Publishing Network

To register, just go to *www.cio.com/money*.

©2004 Quest Software, Inc. All rights reserved. Quest and Quest Software are trademarks or registered trademarks of Quest Software. All other brand or product names are trademarks or registered trademarks of their respective holders. Microsoft is a registered trademark of Microsoft Corporation in the United States and other countries. FALL/2004/CIO

More value.
More expertise.
More proof.



No wonder Quest was awarded Microsoft's 2004 Global ISV Partner of the Year.

Value for your business. Expertise to deliver what you need. Proof that your vendor understands your complex IT environment. You need it. Quest Software delivers it. Quest simplifies, automates, and secures the application and infrastructure management of more than 18,000 companies around the world – including more than 75% of the Fortune 500.

By providing the solutions that simplify your IT environment, Quest helps you focus on the issues that matter most to you. Revenue and profit. Shareholder value and ROI. Security and compliance. Long-term business strategy.

Simply put, we do more. And we can prove it. For more information, visit www.quest.com/microsoft today.

QUEST SOFTWARE®

Middleware is Everywhere.

Can you see it?

2

3

IBM

5

Lotus. Key

1. List of new leads e-mailed pre-takeoff.
2. Prototype specs updated securely.
3. New specs modified in showroom.
4. Modified specs accessed via PDA.
5. Proposals sent to new leads pre-deadline.

MIDDLEWARE IS IBM SOFTWARE. Collaborative software from Lotus that creates one unified platform between employees, partners, customers and vendors. Building off of existing tools, it's flexible and dynamic. It's software that can increase productivity by enabling on demand business. On virtually any kind of device. Everywhere around the globe. Everywhere in between.

Middleware for the on demand world. Learn more at **ibm.com**/middleware/collaborate ON DEMAND BUSINESS™

IBM, the IBM logo, Lotus and the On Demand logo are registered trademarks or trademarks of International Business Machines Corporation in the United States and/or other countries. © 2004 IBM Corporation. All rights reserved.

CIO The Resource for Information Executives

President and CEO Walter Manninen

Publisher Gary J. Beach

Editorial Director Lew McCreary

EDITORIAL

Editor in Chief Abbie Lundberg

Editor Richard Pastore

Managing Editors Michael Goldberg, David Rosenbaum

Managing Editor, Production Cheryl R. Asselin

Executive Editors Alison Bass, Christopher Koch

Washington Bureau Chief Allan Holmes

Leadership and Management Editor Edward Prewitt, **Opinion and Knowledge Management Editor** Megan Santosus, **Research Editor** Lorraine Cosgrove Ware, **Special Projects Editor** Mindy Blodgett, **Technology Editor** Christopher Lindquist

Senior Editors
Scott Berinato, Alice Dragoon, Elana Varon

Senior Writers Meridith Levinson, Stephanie Overby, Susannah Patton, Ben Worthen

Staff Writer Thomas Wailgum

Senior Copy Editors Diann Daniel, Emily S. Henderson

Copy Editor Cathy Mallen

Assoc. Copy Editor Daniel John Robinson

Special Projects Manager Lynne Z. Rigolini

Editorial Resource Manager Carol Zarrow

Editorial Assistants
Daniel J. Horgan, Margaret Locher, Al Sacco

Editorial Operations Specialist Julie Hanson

Contributor Kim Girard

Research Contributor Sally Chicotel

How to Reach Us

E-Mail *letters@cio.com*

Phone 508 872-0080

Fax 508 879-7784

Address CIO Magazine, CXO Media Inc.,
492 Old Connecticut Path, P.O. Box 9208,
Framingham, MA 01701-9208

Website *www.cio.com*

Topic Experts *www.cio.com/online_beats2.html*

Subscriber Services 866 354-1125, Fax 847 564-9453,
E-mail *cio@omeda.com*

Reprint Services Monica Hesse • 651 582-3845,
E-mail *cioreprints@rsicopyright.com* (500 quantity or more)

Rights and Permission Andrew Burrell • 508 935-4785,
E-mail *aburrell@cio.com*

DESIGN

Executive Director, Art and Design Mary Lester

Art Director Terri Haas

Associate Art Director Owen Edwards

Designers Joanna De Fazio, Jenna Talbott

Associate Designers Neva Tachkova, Helen Zhai

Design Operations Specialist Rachel Barnett

ONLINE EDITORIAL

Web Editorial Director Art Jahnke

Web Executive Editor and Producer Janice Brand

Web Editor Sandy Kendall

Web Writer Jon Surmacz

ONLINE & INFORMATION SYSTEMS

Chief Information Officer Mark Hall

Online

Senior VP/General Manager, Online Tim Horgan

Senior Web Developer Ellen Morey

E-Commerce Manager Andrew Burrell

Online Producers Todd Borglund, Shannon Macdonald

Designer Graham White

Assoc. Web Developer Anthony Servideo

Information Systems

Director of Information Technology Dagmar Eiben

Infrastructure Manager James C. Burgoyne

User Services Manager Ron Bettencourt

Senior User Services Specialists
Jonathan Frappier, Michael Fahlsing

System Administrator Robert Reagan

CIRCULATION

Senior VP/Circulation Carol A. Spach

Circulation Director Faith Marcello

Subscription Svcs. Supervisor Tina Pescaro

PRODUCTION

VP/Manufacturing Chris Cuoco

Production Manager Lee Tuttle

Senior Production Coordinator Lisa Stevenson

EXECUTIVE PROGRAMS

EP Senior Vice President Jennifer Richards

Conference Management Vice President
Cynthia Mollus

Marketing Services Director Shellie Rapson James

Business Development Vice President John Amato

Business Development Director John Vulopas

Program Operations Manager Brian Fuce

Marketing Manager Glede Kabongo

Marketing Design Specialist Andrea Slobogan

Senior Client Relations Specialist Sandra J. Hughey

Senior Logistics Coordinator Michael Barbato

Event Planning Director Amy Turell

Senior Customer Services Coordinator Sarah Yee

CIO EXECUTIVE COUNCIL

General Manager Mark Hall

Managing Director Martha Heller

Director of External Relations Karen Fogerty

Director, Project Management Office Amy Field

Consulting Editor Richard Pastore

Member Services Managers
Bill Golden, Carrie Mathews

Program Managers Mindy Hogan, David Parker, Jennifer Riley, Steve Rovniak, Stacy Sudan, Kristina Sweet, Greg Szumowski

Operations Specialist Lisa Byron

MARKETING

Executive VP/CMO Cathy O'Leary Hayes

VP/News and Information Susan Watson

Program Administrator Lori Piscatelli

Marketing Research Director Bridget Cammarata

Marketing Research Managers
Carolyn Johnson, Dylan DiGregorio

Marketing Comm. Director Sue Yanovitch

Sr. Marketing Comm. Specialists
Sarah Crowley, Kara Murphy

Marketing Comm. Coordinator Lynn Holmlund

ADMINISTRATION

Director of Finance Margarita Chiango

Finance and Operations Analyst Chris Bernardi

Executive Assistant to the President Diane Martin

Billing Administrator Joyce Gillis

Facilities Specialist John Kelley

Office Services Coordinator Mary E. Wooldridge

HUMAN RESOURCES

Human Resources Vice President Patricia Chisholm

Human Resources Manager Tanya Bureau

Senior HR Representative Beth S. Ramistella

CXO MEDIA INC.

INTERNATIONAL DATA GROUP

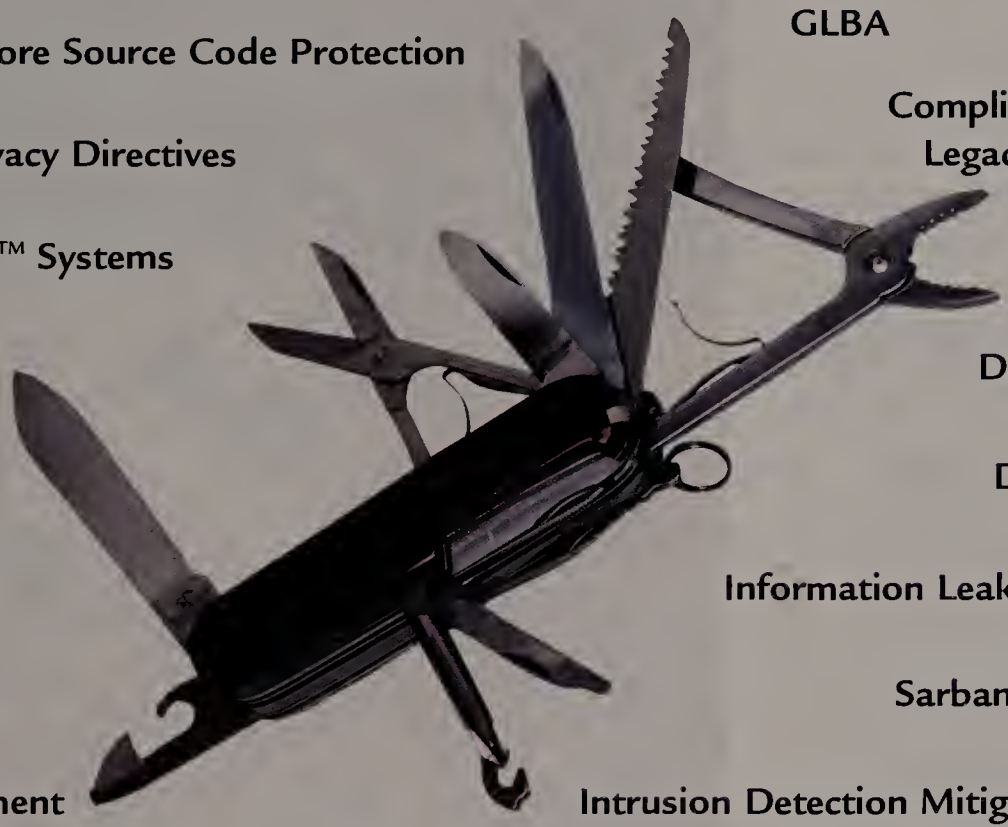
CEO Pat Kenealy

Board Chairman Patrick J. McGovern

BPA WORLDWIDE

©CXO Media Inc.

Digital Guardian...



Off-shore Source Code Protection

SB1386 Privacy Directives

Security for Citrix™ Systems

Virus Infection Mitigation

ISO17799

Data Redaction

ITAR Compliance

Patch Management

GLBA

Compliance Logging for Legacy Applications

21CFR11

Desktop Provisioning

Data Containment

Information Leakage Prevention

Sarbanes Oxley

Intrusion Detection Mitigation

...the Swiss Army™ knife for information security professionals.

You face a myriad of information security challenges. That doesn't mean you need a myriad of security and compliance solutions.

"Complying with shifting regulatory directives on privacy and information security is difficult at best. To be effective in today's environment, security professionals need a solid foundation to build a defense in depth security infrastructure. Digital Guardian is the only choice."

Dr. Dan Geer, Chief Scientist, Verdasys

Let us help you cut your way through the complexity of regulatory compliance. To learn more, or to request copies of our whitepapers and solution briefs, email us at compliance@verdasys.com, visit www.verdasys.com, or call 781-788-8180.

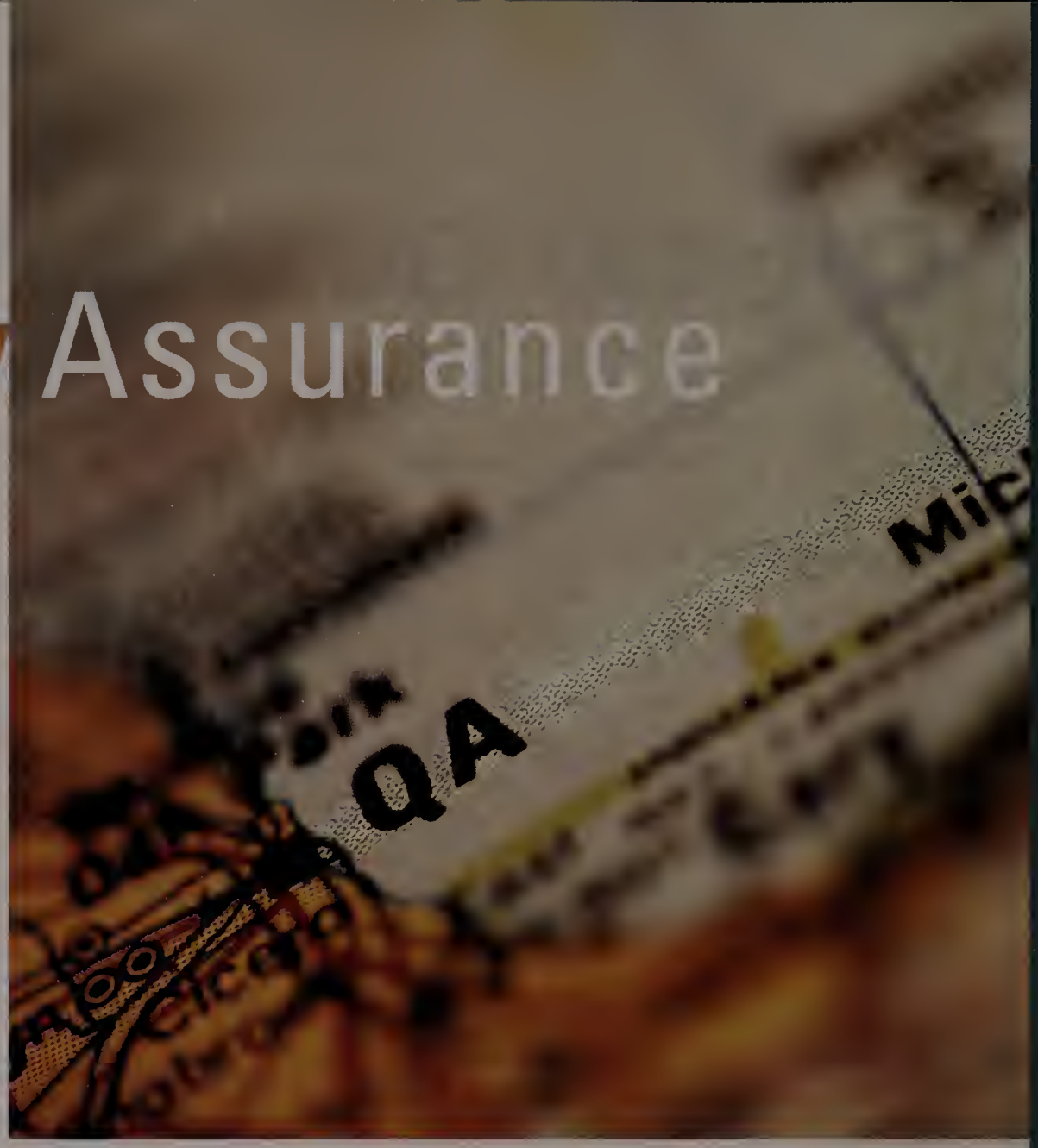
VERDASYS™

information security solutions

© 2004 Verdasys, Inc. Verdasys, the Verdasys logo and Digital Guardian are trademarks of Verdasys, Inc. Swiss Army is a trademark of Victorinox, Citrix is a registered trademark of Citrix Systems, Inc.

Advertising Supplement

Roadmap to Quality Assurance



Four Steps to Quality in Global Software Development

Quality assurance isn't what it used to be. It isn't where or when it used to be, either.

Whether you're talking about applications for internal use or software products for market, the development cycle has changed considerably in recent years.

Traditionally, QA testing has taken place toward the end of the software-development process, just before launch. But by then, of course, problems and errors are deeply imbedded in the product, leaving QA teams with the challenging task of resolving them under intensive pressure to get the product out the door as quickly as possible.

"If you have six weeks to test, the issues you're finding are often going to take 12 weeks to fix," says Satish Maripuri, COO of VeriTest, a division of Waltham, Mass.-based Lionbridge, which offers development, testing and global deployment services. Because they're always working against the clock, testers must often make tough choices—or set tough priorities—to keep to the schedule. And that frantic pace comes with a price. As Maripuri notes: "The cost of fixing a problem at the end of the road may be 10 times higher than if it's caught earlier." But that scenario is changing. QA testing, once an afterthought, has evolved into an integral part of the design process and a key component in accelerating time to market.

In other words, cutting-edge development teams no longer view QA testing as a time-consuming, last-minute necessity. Instead, they think about quality at the source, adopting the notion of QA testing as a best practice right from the start.

That approach has never been more important than now, as companies increasingly turn to "smart sourcing," or finding the best resources available for the best price anywhere in the world. Some types of software testing are among the top candidates for full or partial offshore outsourcing for several reasons: it's more portable than hardware, specifications and processes can be easily documented, and skilled testers are available in abundance.

> "The faster you can find and prevent and fix quality issues up front, the easier it is to shorten your software development cycle time at the end."
> —*Satish Maripuri, COO, VeriTest*

By incorporating QA testing from the start, widely dispersed teams can address problems as they arise, before they're set in code, saving money at every step and streamlining and shortening the final stage of testing.

"It's simple," Maripuri says. "The faster you can find and prevent and fix quality issues up front, the easier it is

Free QA Consultation
Schedule a free consultation with a VeriTest QA analyst by calling 919/380-3876 or e-mailing louann_millar@veritest.com

VeriTest®
A Division of Lionbridge

Top 10 QA Traps

The top 10 mistakes organizations make in their quest for world-class quality are:

1. No ownership of product quality.
2. No overall test program design or goals.
3. Non-existent or ill-defined test plans and cases.
4. Testing that focuses narrowly on functional cases.
5. No ad hoc, stress or boundary testing.
6. Use of inconsistent or incorrect testing methodology.
7. Relying on inexperienced testers.
8. Improper use of tools and automation, resulting in lost time and reduced ROI.
9. No meaningful metrics for tracking bugs and driving quality back into development.
10. Incomplete regression cycle before software release.

Want to avoid these pitfalls? Download free resources, including VeriTest's white paper "Optimizing Quality Practices for Software Development," at **www.veritest.com/qa**.

to shorten your cycle time at the end."

Following are four phases of integrating QA into the entire global software-development cycle:

1. Discovery

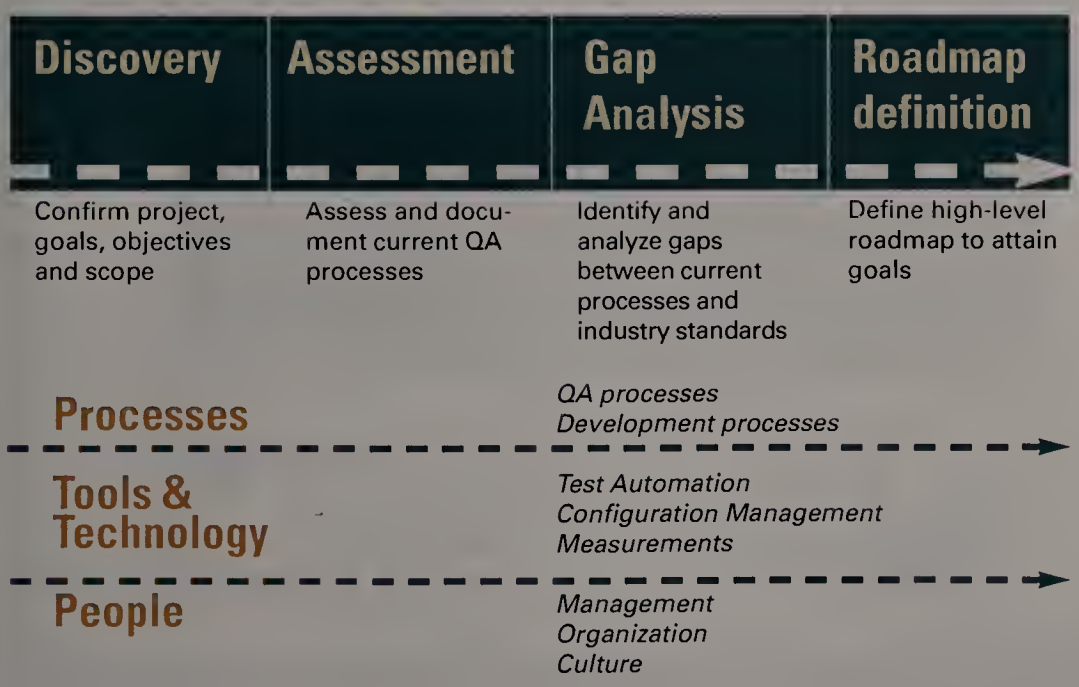
Whether you develop applications to use internally in your lines of business, or you produce and sell software, whether you outsource engineering or do the job in-house, it's critical to begin with discovery.

That means taking inventory of current development and testing processes, systems, practices, people and tools in every location before you start overhauling your approach. Your inventory should also identify stakeholders in a range of areas: business analysts, customers, project managers, development managers, test managers and QA technical managers. Finally, this is the time to determine objectives, expectations and measurements for success for both groups and individuals.

Taking stock of what you've got today will help determine where you're headed and what issues are likely to arise along the way.

2. Assessment

The next step: understanding the maturity of your organization's current software-development processes. To accomplish that goal, you should evaluate current capabilities in software product synthesis, inspections, formal reviews, testing and customer service. This stage might also include competitive analysis—that is, examining the best aspects of rival products—as well as surveying users about what features they'd like included. Depending on the type and scope of project, developers might even do early usability testing by creating mock-ups of interfaces for user focus groups.



3. Gap Analysis

At this stage, you can get a good grasp of where your company stands by comparing your processes with best practices. As Maripuri puts it: "Gaps represent opportunities for improvement." With that information in hand, you can pinpoint and address the quality deficits uncovered in your assessment. The ultimate goal: developing a customized list of best practices in sync with industry standards, which you can begin implementing throughout the software-development cycle.

At this stage, you may also consider the globalization aspects of development, which, like QA, should be built into the cycle from the start. Based on your company's situation, you'll choose between two routes. You can internationalize and localize the software—that is, adapt it to the technical, cultural, legal and linguistic requirements of particular locales—during the initial implementation. Or you can simply make provisions now for attaching localized components later.

4. Roadmap Definition

In this final step, you'll define a high-level business plan for reaching your desired QA destination. After implementation, you'll go full circle, returning to your initial assessment and gap analysis and comparing what you find with your newly redesigned cycle. At this stage, you may want to use customized metrics for gauging the ROI of building quality assurance into your software-development processes from day one. But by the time they attain roadmap definition, most organizations will already have experienced the benefits firsthand. As VeriTest's Maripuri says, "It's all about faster time to market." ♦

VeriTest®
A Division of Lionbridge

For More Information
Request more information on QA best practices and VeriTest by calling 781/434-6123 or e-mailing info@veritest.com

STRATEGIC SUCCESS IS CLOSER THAN YOU THINK!

Disciplined execution. The key to strategic success. Getting there is the challenge. We help organizations rapidly move to a culture of disciplined execution through our innovative immersion leadership training programs and on-site support. Focusing on practical and proven leadership and program management techniques, not theory, our 6 Day and 4 Day Boot Camp programs provide leaders with the experiences, tools, techniques, skills, knowledge and discipline to execute successfully. Your return on investment is immediate.

Achieve strategic success today by rapidly maturing the leadership and program management skills of your professionals. Let us help you implement an infrastructure that delivers on your strategic vision.

PMLG Sponsors the
International Portfolio & Program Office Summit
Oct. 10th - 13th Savannah, Georgia
For information, go to www.pmlg.com.

PMLG
Project Management Leadership Group

www.pmlg.com • 1.888.252.0808
Achieve Strategic Vision Through Portfolio Success™

Registered Education Provider
Project Management Institute

·BOOT CAMP™
PMLG CERTIFIED

• Project Office Implementations • Project Office Maturity Assessments • Certification Boot Camps • PM Maturity Assessments • Portfolio Management Implementation
• Microsoft Project Server Implementation • On-Site Coaching & Mentoring Support • PMP® Preparation Courses • Niku Implementation and Training

PML20

PMP is a registered trademark of the Project Management Institute. PMM is a registered trademark of Project Management Leadership Group.

trendlines

the **NEW** *the* **HOT** *the* **UNEXPECTED**

Edited by Michael Goldberg

I.T. MANAGEMENT

Hired Guns, Finance-Style

Big-company CIOs hire their own departmental CFOs

Janette Zabransky is a financial specialist whose job is to make sure that everyone in IT at American Airlines speaks ROI. Her hiring underscores CIO Monte Ford's priority that the airline's IT department will have a solid financial footing. Zabransky is the airline's IT finance director. In other words, she's a CFO who reports to Ford, rather than the other way around.

Most every CIO juggling an IT budget of at least $500 million hires an IT controller these days—the equivalent of a CIO's own CFO, says Louis Boyle, a senior vice president and analyst at Stamford, Conn.-based market researcher Meta Group. Boyle expects the number of companies with IT controllers to swell from a current 20 percent of the Global 2000 to 40 percent by the end of next year.

CIOs expect their finance guru to be not only a budget watchdog, but also a partner who whips the department into line with the CEO's business objectives and speaks the CFO's language.

The trend takes a different shape in different companies. General Motors has a global information officer for finance who oversees the implementation of IT and business services worldwide. At Glenview, Ill.-based Combined Insurance Company of America, Executive Vice President and CIO Koorosh Beigian huddles with a finance team that helps him provide the CEO with the right tools to beat rivals with fatter margins on sales of accident, life, health and long-term care insurance. Insurance is a margins game based on rates and risk. The finance team's job is to make sure any increase in IT expense—a new claims system or product

Continued on Page 16

American Airlines CIO Monte Ford hired finance expert Janette Zabransky to better manage IT budgets and build closer ties to the CFO.

PHOTO TOP BY CHET SNEDDEN; LEFT BY AP/WIDE WORLD PHOTOS

"**Three suggestions for investors: First**, beware of companies displaying weak accounting. When managements take the low road in aspects that are visible, it is likely they are following a similar path behind the scenes. **Second**, if you can't understand a footnote or other managerial explanation, it's usually because the CEO doesn't want you to. **Finally**, be suspicious of companies that trumpet earnings projections. Businesses seldom operate in a tranquil, no-surprise environment."

–WARREN E. BUFFETT, CEO of Berkshire Hathaway, in the company's 2002 annual report.

EXECUTIVE SUITE

Support Efforts for the CIO-CFO Relationship

Garry Lowenthal

In the gap between CIOs and CFOs stands Garry Lowenthal. In October 2003, Lowenthal, CFO at Viper Motorcycle and chairman of the finance and IT committee at Financial Executive International (FEI), joined efforts with Society for Information Management (SIM) to create a mentoring program for CIOs and CFOs.

The group's aim is to get finance gurus and IT chieftains to mentor each other. (The influential FEI has 15,000 members, including finance execs from Sony, the Federal Reserve and General Electric. SIM, a group of senior IT executives, has 3,000 members.)

Lowenthal is all too aware that many CIOs struggle with their relationships with CFOs, although about half of them now report to the top fiscal watchdog. He says his goal is to match CIOs with CFOs of similar size organizations in different industries so they can share advice on different issues, such as the impact of Sarbanes-Oxley (which creates new standards of accounting compliance for both CFOs and CIOs) and other federal regulatory changes. "There's always a better way of doing something and I'm thinking 'Why don't we share knowledge?'" Lowenthal says. "That's the true spirit of networking."

One of Lowenthal's first moves will be to develop an e-mail list that CFOs and CIOs can opt to join. Twice a month, four questions will be sent out to the group, inquiring about topics ranging from useful IT tools for regulatory compliance to IT project pitfalls. The group may also try moderated online discussions on the FEI site (*www.fei.org*), where they will invite a CIO and CFO to sound off (anonymously, of course) on a topic such as Sarbanes-Oxley compliance or other topics.

Combined meetings of local SIM and FEI chapters have taken place, and events on a larger scale are planned. FEI and SIM have announced a joint event, with sessions on creating and measuring business value among other topics, at the annual SIMposium conference in Chicago, from Sept. 12 to 14.

Peggy Yocher, an insurance industry IT executive who belongs to both FEI and SIM, says the joint efforts are essential to corporations' government compliance efforts. "You can't do it all without working hand in hand," she says.

"I think it's popular for people to focus on the adversarial role [of the CFO versus the CIO]," she says. "But we've had meetings with many different companies and I see a much more balanced role between them."

–Kim Girard

MORE IN THIS ISSUE

To read how CIOs and CFOs *should* communicate, see "The Dollar Dialogues," Page 44.

Hired Guns

Continued from Page 15

offering, say—must demonstrate proof of a rapid return on investment.

At American, Ford hired Zabransky as his chief of finance soon after he joined in 2000. She is helping him shift his IT budget goals from "being on time and on budget," which the department has mastered, toward forecasting future IT costs. Zabransky also works to unite Ford's goals with that of the airline's CFO. For example, the CFO recently brought up the idea of spending more on self-service features on its website, *www.AA.com*, to reduce check-in costs. "It was an angle that I hadn't thought about," Ford says. "Now Janette will talk to the financial folks and we'll see the CFO, and she'll lead a discussion on his idea set," Ford says. "Janette is the driver of all of this—the engine behind that whole part of the locomotive."

This was a new situation for Zabransky, who says in the past she's worked for companies where IT and finance were on completely different pages. "You're rattling off tech terms and it just doesn't work well in a boardroom," she says. "You have an extraordinarily difficult time getting a budget through."

Within smaller companies, of course, this lead IT finance role often falls on the CIO, or the finance and IT roles are combined. When David Root joined as director of finance of Eagle's Flight, a management consultancy with 130 employees, he eliminated his head of IT and took over that job. "We found that the hard-core IT people had a hard time seeing (ROI)," he says. "They wanted to solve the problem but didn't necessarily look at the finances behind solving the problem."

Meta's Boyle predicts that by 2005, the role of IT controller within corporations will shift from watchdog to strategic business collaborator, often with solid line reporting to the CFO and dotted-line reporting to the CIO. It's another sign that the bean counters are more powerful—and necessary—than ever. *–K.G.*

ILLUSTRATION BY JOE CIARDIELLO

You're invited.

(downtime, excess cost, and human errors are not)

See a live InfraStruXure™ installation today.*

REGISTER NOW

Online:
Go to *http://promo.apc.com* and enter key code s385y

By Phone:
Call 1-888-289-APCC x3211

APC®
Legendary Reliability®

*Registration is required. Qualified IT professionals will receive e-mail confirmation

You're invited.

(to find out more with this valuable free white paper)

☐ **YES!** Please send me my FREE white paper - "Physical Security in Mission Critical Facilities"

☐ **NO,** I'm not interested at this time, but please add me to your mailing list.

Name: Title:

Company:

Address: Address 2:

City/Town: State: Zip: Country:

Phone: Fax: E-mail:

☐ ***Yes!*** ***Send me more information via e-mail and sign me up for APC PowerNews e-mail newsletter.*** **Key Code** s385y

What type of availability solution do you need?

☐ UPS: 0-16kVA (Single-phase) ☐ UPS: 10-80kVA (3-phase AC) ☐ UPS: 80+ kVA (3-phase AC) ☐ DC Power
☐ Network Enclosures and Racks ☐ Precision Air Conditioning ☐ Monitoring and Management ☐ Cables/Wires
☐ Mobile Protection ☐ Surge Protection ☐ UPS Upgrade ☐ Don't know

Purchase timeframe? ☐ < 1 Month ☐ 1-3 Months ☐ 3-12 Months ☐ 1 Yr. Plus ☐ Don't know

You are (check 1): ☐ Home/Home Office ☐ Business (<1000 employees) ☐ Large Corp. (>1000 employees)
☐ Gov't., Education, Public Org. ☐ APC Sellers & Partners

©2004 APC. All trademarks are the property of their owners. ISX3D4EB-US_2c • E-mail: esupport@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 36 WEST KINGSTON, RI

POSTAGE WILL BE PAID BY ADDRESSEE

APC®
AMERICAN POWER CONVERSION

ATTENTION CRC: s385y
Department: B
132 FAIRGROUNDS ROAD
PO BOX 278
WEST KINGSTON RI 02892-9920

How to Contact APC

Call: (888) 289-APCC
use the extension on the reverse side

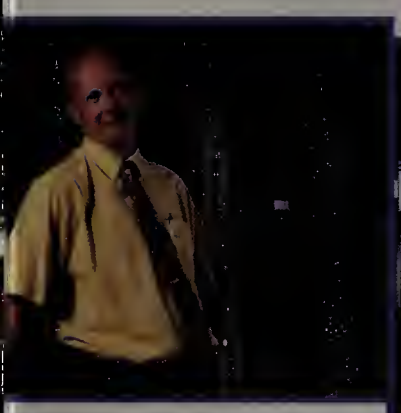
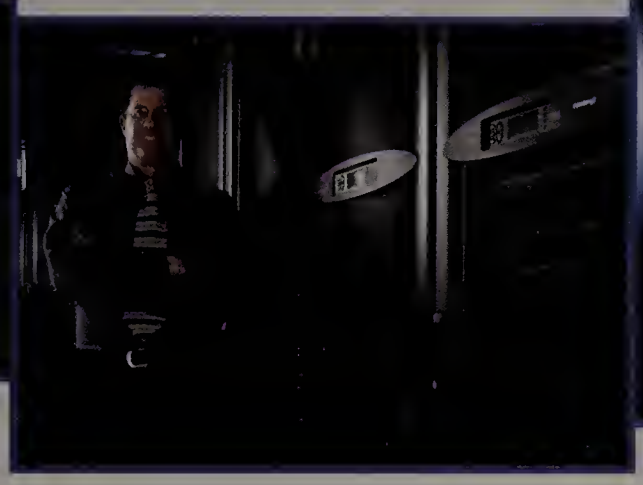
Fax: (401) 788-2797

Visit: *http://promo.apc.com*
use the key code on the reverse side

APC®
Legendary Reliability®

You're invited.

(downtime, excess cost, and human errors are not)

From Houston to Hong Kong, smart IT managers everywhere are trading in legacy data center design for a more available, agile, scalable approach. Finally, racks, power, cooling, and management can become a competitive edge that moves as fast as your business, rather than an expensive headache. The opportunity to make a difference is real, and you can see it working at a site near you. Come and see the future!

InfraStruXure™

POWER RACK COOLING

On-demand architecture for network-critical physical infrastructure

Food and thought.

You're invited to represent your company at an APC Real-time InfraStruXure™ Award Dinner, coming to a city near you. There, not only will you discover the latest innovations in data center physical infrastructure, but you'll enjoy a good meal on us, shared with some of the most advanced thinkers in the industry. What better way to learn how your peers are keeping pace with InfraStruXure, on-demand architecture for network-critical physical infrastructure than to see it firsthand?

Highly available. Adaptable. Lower cost.

Scalable, modular InfraStruXure architecture includes power, cooling, racks and physical structure, security and fire protection, and cabling, as well as the management and servicing of these elements. InfraStruXure leaves you poised to quickly adapt to change and increase system availability - all at a lower cost and with fewer hassles than legacy design. It's a rare win-win situation - you save both money and time, allowing you to invest more in the applications that drive real competitive advantage for your company. After all, is your next promotion really coming from your choice of battery vendors?

Join the crowd.

Don't miss this opportunity to see industry best practices in action. See firsthand how companies worldwide are reaping the benefits of InfraStruXure's standardized, pre-tested approach to data center design. Because this exclusive event is limited to IT professionals, there are only a limited number of available openings.

Register today!

Events fill quickly, and if we are unable to book your attendance at your first choice, we will do our best to accommodate you as quickly as possible.

No wires, no smoke and mirrors - just higher availability and lower costs. See a live InfraStruXure™ installation near you today.*

To Register: Online - Go to *http://promo.apc.com* and enter key code s385y

By Phone - Call 1-888-289-APCC (2722) x3211

APC®

Legendary Reliability®

*Registration is required. Qualified IT professionals will receive e-mail confirmation.

©2004 American Power Conversion Corporation. All Trademarks are the property of their owners. E-mail: esupport@apcc.com • 132 Fairgrounds Road, West Kingston, RI 02892 USA ISX3D4EF-US

SIMULATIONS

Games Test Business Acumen

A recent medical study suggests that surgeons can improve their hand-eye coordination by playing video games. So why not exercise your financial acumen muscles by playing one of the many business simulation games that can hone your skills? There's so much for a wannabe tycoon to do—like running his own cruise line, global conglomerate, supermarket chain or even an intergalactic economy.

PC Games such as *Capitalism II* and *Gazillionaire* challenge the business strategist within. *Capitalism II* tests the would-be CEO in his marketing, manufacturing, purchasing, importing and retailing skills—and, a la The Donald, you get to fire poor-performing COOs and CTOs. (We didn't see a CIO listed.) Though *Gazillionaire* is set in outer space, it claims to assess your supply and demand knowledge as you build your trade empire. (Victory goes to the player worth one billion "kubars.")

Even business schools are bullish on simulations. The University of Pennsylvania's Wharton School, for example, has built 14 business simulation games for undergraduate and MBA candidates as well as executive education courses.

"You need simulations because you're not going to let someone run with a $100 million portfolio," says Gerry McCartney, Wharton's former CIO who's now assistant dean for technology at Purdue University's management school.

Among the simulators are the "Online Trading and Investment Simulator," which allows students—in the role of fund-managers—to "buy" and "sell" equities using today's real-time market data; "Power Play," which focuses on the strategy behind competing for and winning contracts in a competitive bid process; and the "Virtual Interactive Bond Engine," which allows students to build portfolios from a universe of bonds created by the professor.

On the simulators' success, McCartney says, "Just because you do bond trading well on the simulator, it doesn't mean you are going to be a good bond trader. But if you can't do it on the simulator, you'll never be a bond trader."

–Thomas Wailgum

Jim Sloane

BUDGET PROCESS

Taking the Tension out of Meetings

CIO Jim Sloane sticks to accounting basics, builds credibility for IT

Few executives call budget meetings fun. But Jim Sloane, CIO at flooring manufacturer Mannington Mills, says he's figured out how to make them quick and relatively painless.

Sloane tries to keep his budget update meetings with the company's finance department, which occur every four weeks, to 20 minutes or less. One key, says Sloane, is to focus these meetings on basic accrual accounting principals, examining budget expenses that apply to the month or quarter in which they occur. For example, Sloane accrues the expense for a software maintenance contract to the period for which he used that software, even if an invoice hasn't arrived yet. (For more accounting fundamentals, see "What CIOs Need to Know," Page 22).

Second, Sloane says that it pays to focus on budget items that are going much faster or slower than expected. "We don't worry about dollars and cents here and there. But if something is over by $10,000, we have to figure out what happened," he says.

Once he explained accrual accounting to his direct reports, things went a lot more smoothly. "Using accruals keeps you from fluctuating wildly up and down against the budget, it helps the business plan better, and, quite frankly, it eliminates the time and energy it would take to explain those fluctuations."

Today, Sloane says, 95 percent of the budget is right on track and it takes little time to go over the variances. Trust levels between finance and IT are high. "Over time you're able to establish a level of trust, and in difficult years, come in significantly under budget, and senior management will say, 'We have a lot of faith in this individual and his budget.'"

–Stephanie Overby

ILLUSTRATIONS BY DAN PICASSO

Tech Counsel

Advertising Supplement

Same Page, Same Tune

Where I live in New Hampshire, there used to be a saying about our fiscally conservative legislature: "They're obsessed with the cost of everything and the value of nothing."

The same once was true of corporate financial leaders: they were eagle-eyed about the cost of IT, but bat-blind to its business value. And, frankly, CIOs didn't do much to change perceptions.

Clearly, times have changed.

Shaken by economic disaster and strengthened by recovery, today's CIO is fiscally wiser; the CFO is technologically inspired. Budget confrontations have evolved to conversations. The cost of everything is still an obsession, but it's now couched within a shared context: the business value of IT.

And *that's* a platform we all can support.

Tom Field is Director of Content Development in CXO Media's Custom Publishing Group.

Technology Investments and Increasing Business Value

Today CIOs and CFOs are pretty similar and their decision-making practices have become closely aligned. The primary objective of these two C-Level executives is to implement improved processes within the organization. Both strive to ensure that all business areas run efficiently, are cost effective and meet business objectives.

For many organizations, the dot-com era represented a fundamental change in how business processes were conducted. Although many new companies presented exciting opportunities, many didn't adhere to time-tested business theories and failed to follow effective business processes, ultimately resulting in the end of the dot-com era. The one thing we have to remember is that business is business and regardless of whether it is over the Web or in a store, the same basic principles hold true.

With the dot-com era over, and the economy showing signs of improvement, CIOs and CFOs have redefined their business models with an emphasis on improving their bottom lines and maximizing new opportunities through the practice of innovative technologies to better conduct business.

Farhat Ali
COO & CFO
Fujitsu Computer Systems Corporation

This new mindset has created a synergy, between CIOs and CFOs. Prior to recent industry-wide budget cuts in corporate IT spending, CIOs could authorize the purchase and installation of new technology without consulting another C-level executive. Currently, this decision often requires an executive committee vote for approval—clearly not the most effective use of corporate resources. To ensure vital IT projects aren't bogged down in corporate red tape, CIOs and CFOs now work in unison to assure IT needs are aligned with business objectives to improve their organization's overall business processes.

To make certain this collaborative decision-making succeeds, CIOs are gaining a greater economic understanding of technology, while CFOs are obtaining a deeper understanding of the impact IT provides. This system of checks and balance enables IT investments to deliver stronger more efficient business.

FUJITSU

Want to Boost Resource Availability? Standardize!

Standardizing enables human learning, which enables improvement. If IT were to standardize on modular, scaleable, open "building blocks", they would realize substantial gains over the traditional approaches.

•Speed: Most companies have a backlog of business process changes they want to make but have to wait until IT can build out the infrastructure. If IT can change at the same rate of business, the business then can take advantage of flexibility and speed to achieve a competitive advantage.

•Right Sizing: At the beginning of most projects, there is a low, "Knowledge to Assumption" ratio (what's known versus what's assumed) due primarily to both business and technology drivers. Building IT infrastructure that is scalable allows supply to better equal demand with substantial savings.

•Resiliency: Everyone realizes the importance of being able to recover from a disaster, whether man-made or natural. When standardized building blocks are used, recovery time is much shorter.

•Eliminate Human Error: Perhaps the biggest driver of value from standardization is the ability to drive costly defects out of the operation of a data center or any IT infrastructure. Human error is a primary root cause in approximately 60% of the downtime in most data centers today. By standardizing, we enable humans to learn and to then drive defects out. A study of a Western Electric manufacturing process in the 1940s discovered that only 7% of the variation in the output of a stable process is due to the humans running the process and 93% of the variation is characteristic of the process. Therefore, with a stable IT infrastructure built out of standardized, modular, scaleable, open building blocks, the downtime driven by human error should be approximately 7%, not the current 60%.

Russell Senesac
InfraStruXure - Chief Engineer
APC

APC®
Legendary Reliability®

Company Directory

Fujitsu Computer Systems Corporation

Fujitsu Computer Systems is a wholly owned subsidiary of Fujitsu Limited (TSE:6702) committed to the design, development and delivery of advanced computer systems and managed services for the business enterprise. The company offers a complete line of high-performance mobile and desktop computers, scalable and reliable servers as well as managed and professional services.

http://us.fujitsu.com/computers

APC

American Power Conversion is a leading provider of global, end-to-end infrastructure availability solutions. APC's comprehensive products and services offering, which is designed for both home and corporate environments, improves the availability, manageability and performance of sensitive electronic, network, communication and industrial equipment of all sizes.

http://www.apcc.com/products/infrastruxure/index.cfm

The MONEY Issue

The Final Frontier for CIOs

You've mastered the technology. You've learned to manage your relationships with in-house staff, outside contractors, vendors, and even government regulators. And you've come to understand the workings of every business function and process—from marketing to manufacturing, from the home office to the warehouse, from customer service to product distribution. Your IT organization is efficient, aligned, reliable, valued.

There's just one frontier left: money. After all, your enterprise is in business and business means money. You have to make friends with money. You have to understand where it comes from, where it goes and what happens to it along the way.

No matter how impressive the title may sound, a CIO can't truly join the C-class of executives without a comprehension of and appreciation for the concepts and language of finance and accounting. Whether you want your bosses and peers to think about your department as a service provider, a commercial engine or an information utility, you can't make a lasting difference, and you can't meet the other chiefs at eye level, unless you can relate to them on their terms. Money terms.

In this special issue of *CIO*, we've assembled a series of articles designed to get you started on the road to financial understanding. We've included an accounting and finance primer ("What CIOs Need to Know About Money," Page 22). We've sought practical advice from CIOs who've been through budget battles ("Tips from the Budget Masters," Page 38) and prepared presentations for financial analysts ("Talking to Wall Street," Page 50). We follow a CIO as she lives through an audit of her IT operations ("Inside an IT Audit," Page 28). We've created a scenario for how sweet a CIO and CFO's conversation could sound if both parties spoke the same language and were open to each other's views ("The Dollar Dialogues," Page 44). We've collected a list of executive education programs, books and other information designed to build your monetary muscles ("Accounting and Finance Resources," Page 60). And we have an essay ("20 Thoughts About Money," Page 56) that suggests that while everyone comes to this subject with some baggage, the only thing to fear about money is fear itself.

So turn the page. We believe you'll get a significant return on the time you invest reading, especially if you amortize it over the length of your career, depreciating the cost of the chair you're sitting in, the lightbulbs in your home office....

–Michael Goldberg

What CIOs Need to Know About Money

To succeed in business, you need to understand how businesspeople keep score

BY KIM GIRARD

Most CIOs know that hardware depreciates quickly (losing value as an asset on the company's balance sheet). Therefore, leasing instead of buying can sometimes save a company money. ■ And if that nugget of financial insight represented the apex of what CIOs need to know about money, its language and its management, this story—this whole special issue—wouldn't be necessary.

Being a modern-day CIO—an equal partner with your enterprise's other business leaders—is not a matter of saving a nickel here, amortizing an investment there, or even making IT look good on the balance sheet and in the annual report; it's about understanding how to enhance the value of the company as a whole.

That's where an understanding of and an appreciation for finance and accounting pay off. CIOs who are not sensitive to money, who do not speak the language of their CFOs, are setting themselves up to lose their jobs within the first 15 minutes of an annual budget review, warns Paul Strassmann, a researcher on corporate IT value and a former CIO at Kraft, General Foods, NASA, the Department of Defense and Xerox. He's exaggerating only a little. A *CIO* survey in 2003 showed that 25 percent of CIOs were in their current jobs for five years or more, while another 26 percent were in their jobs less than two years.

One reason for this relatively short CIO tenure, Strassmann believes, is the by-now legendary disconnect between how CIOs and CFOs think about their work. "The CFO keeps score through a very complex process that all ends up in earnings per share," Strassmann says. "The CIO thinks in terms of projects—and the twain shall never meet." (For insights into how CIOs can improve communication with their CFOs, see "The Dollar Dialogues," Page 44.)

Asking CIOs to tie what they spend on hardware, software, systems, training and support to a tangible fiscal outcome is a tall order, particularly when the ROI for some IT projects (for example, ERP) isn't as clear-cut as it is for others. But the sad fact is that about 70 percent of all IT organizations are still perceived as cost centers by their business counterparts, according to researchers at Meta Group. And no matter how efficiently it's run, a cost center—a department that spends the company's money—doesn't have the same clout inside most companies as a department that brings money through the door. Consequently, the head of a cost center will never have the same job security as the leader of a revenue-generating unit.

So, to succeed in business, "It's the CIO's job to translate what IT can do for the company" into monetary terms, says Meta Group Senior Vice President Louis Boyle. And the best way to do that is to understand what goes on between the top (revenue) and bottom (profit) lines.

The good news is that this is straightforward stuff. There are a few basic terms, a few fundamental concepts. You probably know them already; if you don't, you can grasp them easily.

The bad news is that understanding is not where this particular exercise ends. It's what you do with this information, how deeply you are able to delve into the meaning of financial information about your company over the course of months and years that matters.

Of course, that doesn't have to be bad news. In fact, it can be pretty interesting. (For a list of financial analysis tools and many business schools that offer MBA-style crash courses for executives, see "Accounting and Finance Resources," Page 60.)

The Basics: Balance Sheets and Income Statements

Accounting, the lingua franca of all business, begins with keeping track of where the money is and where it's going. The **balance sheet** is an instant photograph that shows an organization's financial position at a given moment in time. On one side, the balance sheet lists **assets**, or things the company owns—cash, land, buildings, office equipment, IOUs from customers, patents and a panoply of other things. (The possibilities for what can be counted as assets are literally endless.) On the other side are **liabilities**, which is what the company owes to bankers, suppliers, other creditors and employees. The liabilities side of the balance sheet also includes **equity**, which is the owners' (or shareholders') stake in the company.

Every transaction gets recorded on the balance sheet. At any point—at the end of the third quarter, after receiving cash for a palette of machinery or after paying the office telephone bill—adding up the two sides of the balance sheet must show that assets equal liabilities plus equity. The equity part of the equation is where the action happens. In good times (when assets are more than liabilities), equity rises. When liabilities exceed assets, then owners' equity makes up the difference; if that difference is great enough, owners' equity can even turn to a negative number.

The **income statement** measures a company's ability to earn profits over a period of time (such as a quarter or a year). The income statement shows net income (or profits), which is the difference between **revenue** (the amount of money taken in for goods and services sold) and **expenses** (the cost of goods and services con-

sumed while earning revenue). The more revenue surpasses expenses, the more profits a company earns, the more "black ink" flows, the better the enterprise is doing, and everyone—the board, the executives, you, the stockholders—is happy. Reverse that ratio, and there's trouble in River City.

The Fun: Accounting

Accountants are artists working in the medium of money. As artists, they can create realistic portraits of their subjects—warts and all—or they can create idealized, flattering illusions, which is how Enron appeared to be a Fortune 10 company one day and a bankrupt wreck the next. Fortunately, there are rules. These rules, or standards, established by professional organizations and the government (as with laws such as Sarbanes-Oxley, which altered the responsibilities of those who vouch for the company's books), are called **generally accepted accounting principles (GAAP).** GAAP provide for common terms so that the activities of very different businesses—automakers, airlines, grocery stores—can be recorded and evaluated similarly. The following terms describe some of the universal concepts that are intended to reflect the way businesses actually function.

- **Accrual basis** accounting is required of all publicly traded companies. It calls for the enterprise to recognize revenue during the period in which it is earned, and to report expenses related to that revenue in that same period. If, for example, a company sells a shipload of TVs (or an IT organization sells a quantity of services) at the start of a quarter, it records that as revenue earned during that quarter, whether or not it has been paid (though the company should be able to demonstrate that it expects to collect payment).

Accrual basis accounting records expenses (purchase of materials, shipping costs, labor) related to producing those goods and services in that same quarter. Some private companies and individuals may use **cash basis** accounting, which records revenue when payments arrive and logs expenses whenever those bills are paid.

- **Depreciation** acknowledges the reality that assets lose value over time. Depreciation is treated as an expense on a company's balance sheet, and it comes in two flavors. The first, **straight-line depreciation**, reduces an asset's value at a constant rate. For example, Company ABC records as a depreciation expense the value of its $20,000 truck by $2,000 every year for 10 years. The second method, called **accelerated depreciation**, is when that same truck is written off over a shorter period—$10,000 for the first year, $5,000 the next and $5,000 the third. Companies generally try to depreciate assets as slowly as possible because that gives them less expense and more income, and pretties up the balance sheet. However, if a company is looking for a bigger tax break on a particular asset, it might want to accelerate the depreciation.
- **Historical value** is the price you pay for an asset when you buy it. Accountants use historical value when recording assets such as land (which, in the absence of wars, earthquakes and economic disasters, generally does not depreciate) and buildings (which suffer wear and tear) on a company's balance sheet.

Because this convention doesn't account for market conditions, a widget maker that sells a

Key Concepts

Your CFO uses these tools to take your company's financial temperature. Learn them. Live them.

Debt ratio divides total liabilities by total assets and shows how much of a company's assets are financed through borrowing.

Working capital is the difference between current assets and current liabilities and indicates a company's ability to pay short-term debts.

Return on assets divides operating income by the average investment in assets over the year and is one way of looking at return on investment (ROI).

Net present value (NPV) calculates the expected impact of a project on the value of an organization. It takes into account both the money that a project is expected to generate and the cost of capital used to finance the project. A positive net present value means that the project provides a greater return than what an investor would minimally require—say, putting those funds into a money-market account, treasury bill or other standard low-risk investment.

Economic Value Added (EVA) equals net operating profit minus associated capital charges. EVA encourages managers to monitor assets as well as income and keeps them aware of the trade-offs between the two. Evaluating an ERP system, for example, EVA would include any and all related expenses—initial cash outlays, maintenance, and internal and external training costs—and take those as a charge against anticipated benefits, which might be increased revenue or reduced costs.

Total cost of ownership (TCO) is an efficiency metric created by Gartner that calculates ongoing support costs of new products and upgrades. It includes the costs of purchase, administration, setup, tech support, maintenance, downtime and any other costs associated with owning an IT asset such as a PC or software package.

Total Economic Impact (TEI) is a decision-support methodology that calculates flexibility by looking at risks associated with the costs, benefits and flexibility of a given investment. For example, when evaluating two options for an IT investment (such as buying a software package or developing the application in-house), risk considerations include the availability and stability of vendors, products, architecture, corporate culture, and size and timing of the project.

SOURCES: *CIO* reporting, including "A Buyer's Guide to IT Value Methodologies," *www.cio.com/money*; also *Accounting: The Basis for Business Decisions* by Robert F. Meigs and Walter B. Meigs.

piece of land it has owned since 1950 and that has increased in market value could see a boost to its quarterly results that has nothing to do with the widget business. If the revenue derived from the sale represents a nonrepeatable event, or is otherwise unusual, the company must note it as such. And this gets to an important point about accounting: It covers everything a company does whether or not it relates to its primary function as a business. That's why analysts create so many measures to gauge a company's performance. Take three simple ones: **cash flow**, **operating income** and **earnings per share.**

Cash flow gives a picture of cash receipts (from customers, investments or other activities) and cash payments a company makes (including debt, interest and dividends) during a given period. The question any analyst will ask is, what's left after all the payments are made? The answer will indicate how well a company is run.

Operating income is one measure of a company's ongoing business health. It accounts for revenues the company takes in and subtracts the everyday costs of doing business. It doesn't include extraordinary items that occur infrequently or, typically, income or expenses related to investments.

Earnings per share computes a publicly traded company's performance by taking its net income (its profits) and dividing it by the average number of shares of its outstanding stock. A bread-and-butter financial analysis called price-earnings ratio takes this a step further by taking the company's stock price and dividing it by its earnings-per-share figure.

Public companies must state their earnings per share on their quarterly and annual income statements. This is one of the big rules intended to ensure that people (or institutions) investing in a company are not buying the proverbial pig in the poke. (A poke is a sack, or bag. A sly farmer would tell a rube that the poke he was buying contained a suckling pig. Upon arriving home, the rube would find a cat. Sometimes, however, the sly farmer would be clumsy, and before he could conclude the sale, he'd "let the cat out of the bag.")

Your Budget: Two Ways to Start

All business activities begin with a budget, outlining what you plan to spend and how you plan to spend it. There are lots of ways to build a budget (for three in-depth examples, see "Tips from the Budget Masters," Page 38). To get into budget think, consider these two contrasting methods for allocating resources: **zero-based budgeting** and **portfolio management.**

Ursula Conway, CIO of Las Vegas-based Ameristar Casinos, begins each budget cycle at zero and builds from there. In this way, she says she justifies every dime her IT group spends. "It's not, oh, last year I had $2 million so I need a 4 percent increase," says Conway, who's also a CPA.

For example, if inflation (the annualized rate at which average prices rise) is 3 percent, and Conway simply and automatically adds 3 percent to her software and hardware budget, she believes that might discourage her from examining contracts that could possibly be combined or renegotiated, terminated or expanded. "We think it's better business to start from scratch to evaluate all the cost components," she says. "It forces you to know your budget."

Boyle of Meta Group says that a CIO needs to go through a zero-based budgeting regimen at least once to derive this deep understanding of the budget. After that, he says, "you don't need to keep redoing it."

Portfolio management, on the other hand, takes a more holistic view, treating IT projects as a group and calling for the CIO to budget each project according to the business need it addresses. This demands that CIOs create a single, integrated view of all IT investments so that they can see how spending on one project affects another, and how the projects' risk-reward profiles do or don't balance (see "How to Do Portfolio Management Right" at *www.cio.com/money*). With this approach, a company can make value judgments about the relative importance of each project.

American Airlines lives by portfolio management, says Janette Zabransky. Zabransky is American's IT finance and vendor management director who serves as CFO of the IT department under CIO Monte Ford.

When, for example, the airline's mechanics recently asked for customized laptops (made to be especially rugged to survive the hangar environment) to replace their desktops, Zabransky figured out what the business unit would save in hours of productivity by giving the mechanics laptops near their workstations, instead of forcing them to trek to a computer room to look up work orders. Those savings alone justified the project idea to her, but Zabransky went a step further: She made the project contingent upon the maintenance and business engineering units committing to the savings she projected for them in their own budgets.

In effect, Zabransky used the other business units' budgets to get approval for the project in her budget, asserting to the executive committee that the savings and increased productivity would pay for the notebooks and have a positive impact on the airline's P&L.

The project got funded; the notebooks were purchased.

The Language of Money

Often, when CIOs talk about IT and money, they're thinking about what IT can do to improve their enterprises' performance. That's certainly not a bad thing, but when CFOs and CEOs talk about IT and money, frequently they're thinking about what IT can do for the company in the eyes of investors. (For more about talking to the people who the stockholders listen to—securities analysts—see "Talking to Wall Street," Page 50.)

To link IT spending to what's good for investors and the bottom line, companies often come up with their own formulas. Stephen N. David, CIO and business-to-business officer at Procter & Gamble, says the company applies a metric called total shareholder return (TSR). TSR looks at sales, cost structure changes and asset usage, among other things, to calculate whether Procter & Gamble is meeting its goals. David works with a chief finance person in IT, and also gets other IT managers looking at TSR.

"Using our finance person [in IT], getting people training, we can translate TSR for IT—What are the drivers? And what can they do?—so IT people, in conjunction with finance people, can work toward TSR goals," he told *CIO* conference attendees in February. He reviews the IT group's portfolio against those measures. They analyze results. Make decisions. The business moves forward.

In other words, the terms David uses to talk about his company's performance come from accounting and finance, the language of money. It takes training to become fluent in that language.

Time to get started. CIO

Kim Girard is a freelance writer based in San Francisco. *Accounting: The Basis for Business Decisions* by Robert F. Meigs and Walter B. Meigs was used as a reference for this article.

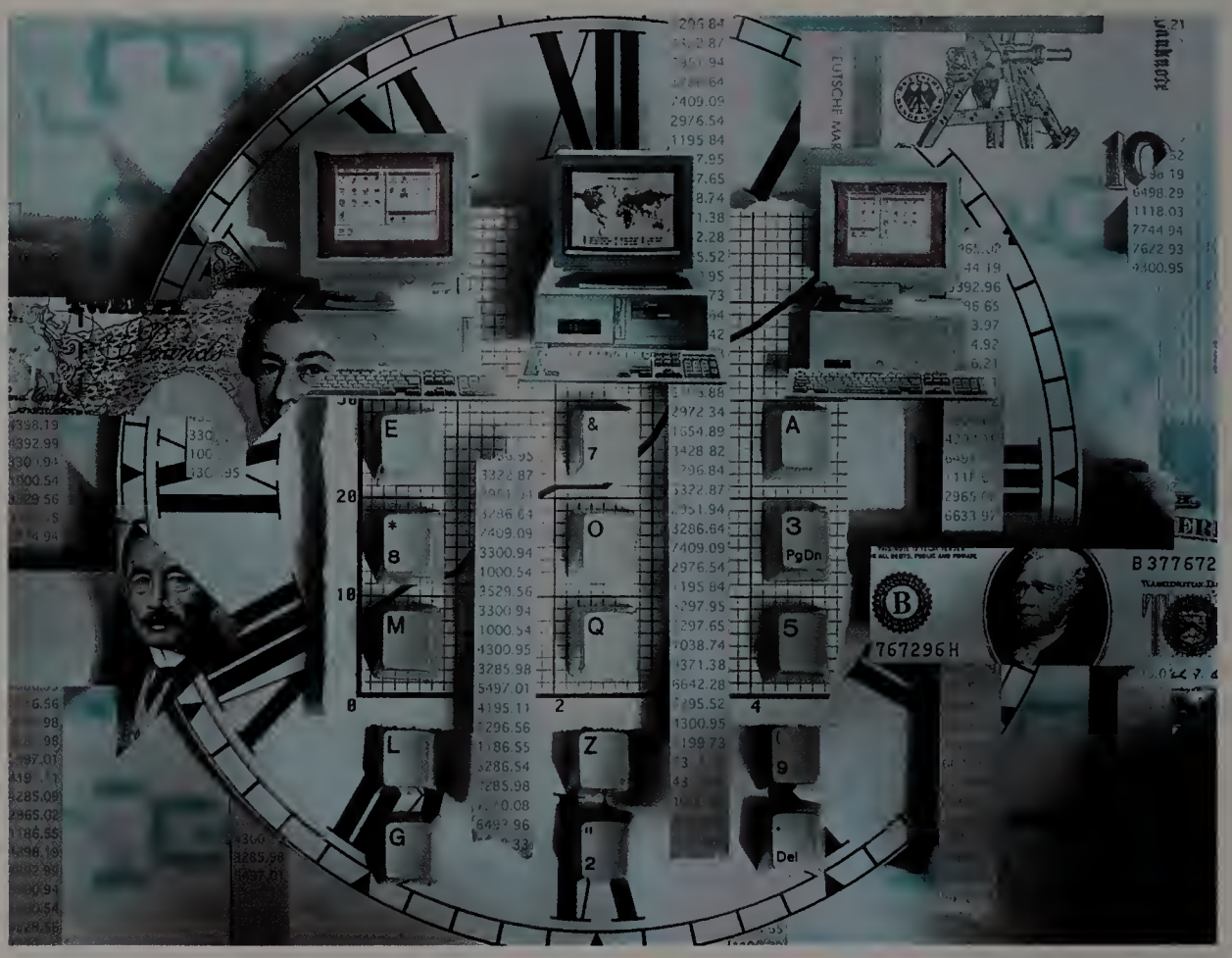
Sponsored by Novell.

Solving the Puzzle of Federated Identity Management

Novell's Project 'Odyssey' Stimulates New Business Opportunities

EXECUTIVE SUMMARY

In today's increasingly regulated business environment, companies need to ensure that users have proper access to information based on context and their role and relationship with the organization—which is why identity management is such a critical part of today's IT infrastructure. But the word "users" no longer refers to only those within the firewall. The need to manage information access across a network of business partners has focused much attention on the concept of federated identity, or securely sharing identity information with business partners—without violating user privacy. Read this special report to learn more about the potential of federated identity solutions.



THE CATCHPHRASE

"networked economy" has been the center of much discussion—but limited action—as security, privacy, legal and management challenges have hamstrung many companies' efforts to drive electronic business beyond network boundaries.

Federation and identity management are the keys to ebusiness success, yet implementing these technologies—as with any strategic project—comes with inherent challenges. Among them:

LIMITED RESOURCES — Companies often lack the time and resources necessary to provide seamless—yet streamlined and secure—access across multiple partner sites.

USER RESISTANCE — Employees and customers do not want to deal with complexity, even when it comes with single sign-on to multiple applications and systems. And nothing saps the resources of an IT staff like continually provisioning, changing and deleting internal user accounts manually, let alone external users.

INTERNAL COMPLEXITIES — Legal liabilities arise from copying identity data among domains of different systems.

Enter Federated Identity

Federation in this context is defined as the secure exchange of personal identity data, such as a username, an email address or even a Social Security number, among systems at multiple organizations with contractual obligations for privacy protection. A user can choose to have single-sign-on access to services from a network of systems run by different organizations, without having to log in multiple times or remember individual passwords.

Industry-wide standards such as Liberty Alliance and secure assertions markup language (SAML) make it possible to federate effectively and protect users' privacy. As a result, federated identity has become the next frontier of identity management, primarily because of its promise: to make it easier for customers and employees to conduct business electronically with a company and its partners.

Federated identity enables organizations to increase business while leveraging their current IT infrastructure to provide application and system access internally and to new users based on existing business partner relationships.

Novell Federated Identity Solutions

"Federated identity represents a huge shift in the way enterprises will do business by enabling consumers to transact and connect from one trusted network partner to another smoothly and securely," says Ashish Larivee, Novell product marketing director. "Privacy concerns are removed because the Liberty Alliance standard provides for the legal mechanism of building trusted relationships, and the individual controls what information is shared."

As part of its market-leading identity management strategy, Novell is advancing technology for federated identity that will enable firms to share and manage identity information securely among business partners while ensuring users' privacy. Novell's Odyssey project is designed to enable the secure federation of identity information based on Phase 2 specifications from Liberty Alliance and SAML. To directly address user privacy concerns, Odyssey, just as Liberty specifies, lets users choose if and when any parts of their information will be shared with other systems.

To provide business and IT leaders with a real-world solution, Odyssey goes well beyond enabling the sharing of identity data. If enabling federation requires users to have accounts on the federated systems, the practicality of the solution is limited. Novell's advanced technology takes the concept of federation a big step further by enabling the automatic provisioning and management of user accounts across each partner system.

This is a critical capability to streamline and increase business opportunities among partners. When a user accesses a partner site where he or she does not have an account, as is frequently the case, there would be an option to automatically request and create a new account based on information in the corporate directory.

"Novell is extending the benefits of secure identity management that companies have seen within their enterprises to trusted business partners, providing customers with a seamless transition to connected partner systems," says Chris Stone, Novell vice-chairman.

One barrier to adoption has been the inability to incorporate the new standards into existing systems. With Odyssey, companies can experience the power and benefits of federated identity very quickly. The Odyssey technology serves as a proxy in front of an existing system to dynamically enable federation for virtually any application or service. Administrators need only install the software on their site and the sites of their trusted service providers with which they want to share identity information. As soon as the two servers exchange the agreed upon metadata, identity information can be federated between systems. Odyssey also allows storage of identity attributes locally or to existing lightweight directory access protocol (LDAP) directories.

This flexibility is viewed as a critical differentiating feature, as many other vendors' systems require software agents to be installed on each application.

"By providing federated identity while accommodating key privacy issues, Novell is enabling businesses to finally do what they've wanted to do for a long time—build successful partnerships for secure and trusted transactions over the Internet, without the cost and complexity of one-off proprietary solutions," says Larivee.

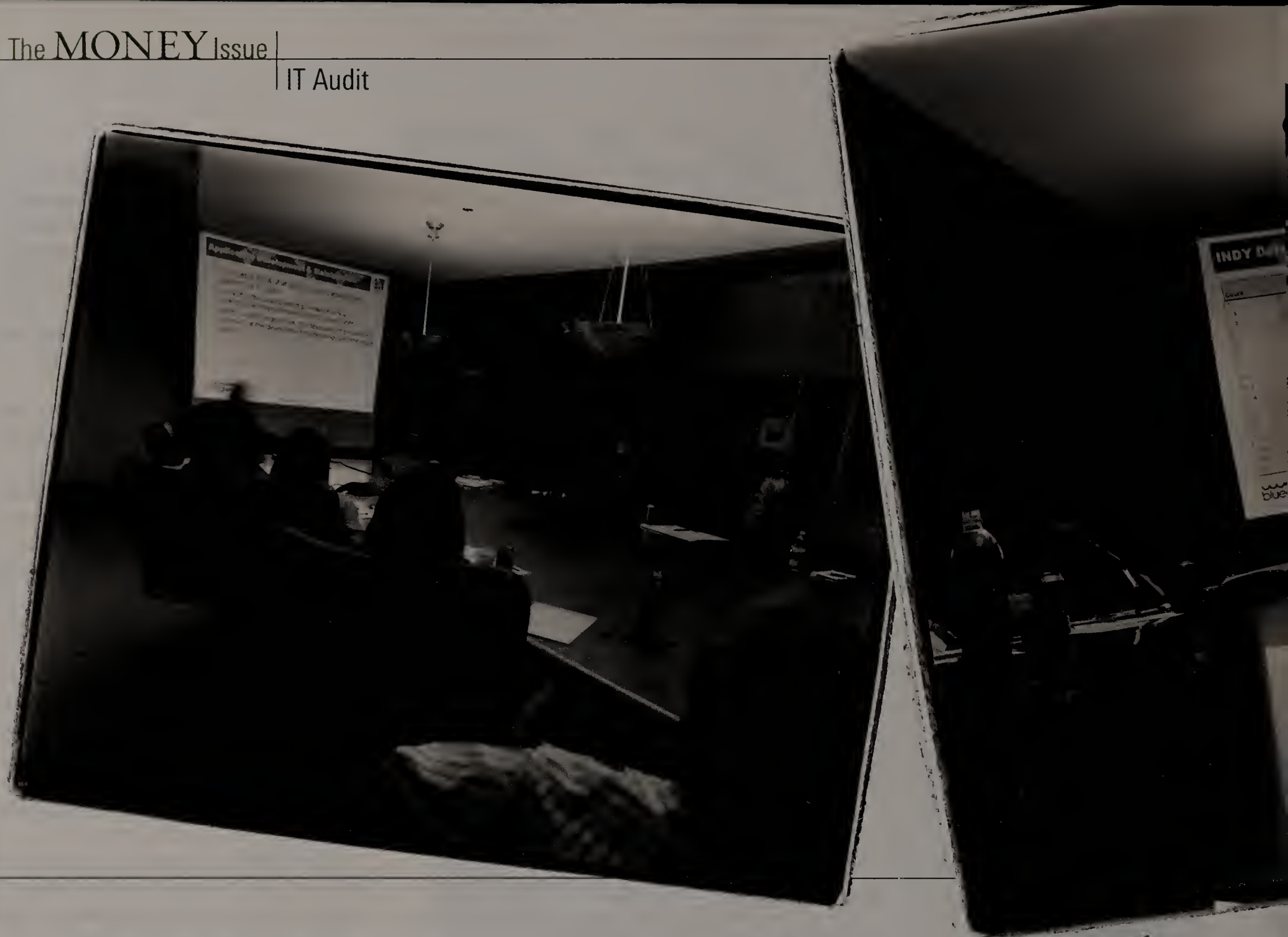
Industry experts believe the vendor's efforts position Novell optimally for a future governed by federated identity management.

"Federated identity between enterprises is the next step in identity management," says Mike Neuenschwander, an analyst with the Burton Group, a technology management consultancy in Midvale, Utah. "By leveraging its provisioning and metadirectory technologies and supporting industry standards, Novell has the potential to be a leading player in this emerging market."

"Federated identity between enterprises is the next step in identity management. By leveraging its provisioning and metadirectory technologies and supporting industry standards, Novell has the potential to be a leading player in this emerging market."

—MIKE NEUENSCHWANDER, ANALYST, BURTON GROUP

FOR MORE INFORMATION about Novell and our solutions, please visit www.novell.com.



Inside

When CIO Sheila Beauchesne started her new job, she wanted to set goals and win the confidence of her executive colleagues. To do that, she needed to know how her IT costs stacked up against other organizations'. So she called in the IT auditors.

BY MERIDITH LEVINSON

Reader ROI

- The importance of conducting IT audits
- How to conduct an IT audit
- What information to gather
- What information can be difficult to obtain

In December 2003, Sheila Beauchesne left her CIO job at troubled Martha Stewart Living Omnimedia in New York City to become senior vice president and CIO at Bluegreen Corp., a Florida real estate developer and vacation resort operator. Bluegreen is a growing company that set records for revenue and profits in 2003. (2003 revenue was $438.5 million, 29 percent higher than 2002; net income was $25.8 million, 138 percent more than 2002.) With that growth in mind, Beauchesne's new boss, CEO George Donovan, asked her to

PHOTOGRAPHY BY ANDREW KAUFMAN

an IT Audit

Auditor David Burkett (at screen) of Global Information Partners presents findings to Bluegreen's IT team about its operations.

turn Bluegreen's 60-person IT department into a utility that would provide the company with a robust, fail-safe IT infrastructure. Donovan also wanted Beauchesne to provide applications that would enhance Bluegreen's sales and marketing activities.

Beauchesne, 39, wanted to start strong. But before she could begin thinking about turning Bluegreen IT into a power plant for growth, she needed a clear idea of what the company was spending on technology. She also wanted to know how Bluegreen's IT spending compared to organizations of similar size. The problem was that Bluegreen's IT accounting wasn't detailed enough. She had only a vague idea what IT was really costing her company.

What Beauchesne needed was an IT audit.

"If You Don't Measure It, You Can't Manage It"

Audits are part of a CIO's job as steward of an organization's IT budget, says Susan Dallas, a research director with Gartner. "CIOs are the custodians of probably the biggest part of a corporation's spending right now. If they don't know where all that money is going, they can't manage it and won't have control over it," she says.

IT audits are also a best practice. A recent *CIO* survey of 103 IT executives shows that 79 percent of respondents audited their IT costs, 72 percent calculated their total cost of ownership for IT systems and 66 percent benchmarked their operations against best-in-class IT organizations. (For more findings, see "How to Run IT Like a Business" at *www.cio.com/money*.)

CIO approached Beauchesne with the idea of arranging an IT audit for Bluegreen that *CIO* could report on. Beauchesne agreed, as did

Global Information Partners (GIP), a 10-person IT consulting company founded in 2001 and based near Atlanta. GIP performed the Bluegreen audit during February and March, and delivered a final presentation on April 1. The audit took seven weeks and consumed 80 hours of Bluegreen staff time—spent gathering data on staffing, hardware and software costs, and the number of supported users—plus countless more hours for follow-up questions on subjects like help desk operations and the number of full-time equivalent employees (FTEs) devoted to various functions within IT. GIP estimates an audit of this scope would cost a company of Bluegreen's size about $85,000.

Today, the audit findings are helping Beauchesne decide where to focus her energy. She also now possesses something invaluable to all CIOs: concrete information on where her costs and service levels don't measure up to other companies of similar size. This is data she can use to build better business cases for her projects and to justify additional IT expenditures to her CEO and to CFO John Chiste.

"If I can show my CEO where we're below the benchmark, that's good info for me to have when I want to justify where we may need to change spending patterns," Beauchesne says.

Bluegreen Stats

2003 Revenue: $438.5 million

2003 Net income: $25.8 million

Total number of employees: More than 4,000

Number of corporate employees: 450

Number of resorts managed: 3,700 in the United States and Aruba

Bluegreen CIO Sheila Beauchesne: "If I can show my CEO where we're below the benchmark, that's good info to have when I want to justify changing spending patterns."

Audit Begins Well

On February 12, 2004, in a cramped, windowless office at Bluegreen headquarters, the three GIP auditors gather at 9 a.m. to prep for their first meeting with Beauchesne and Krista Parker, Bluegreen's IT financial auditor whom Beauchesne has made the audit's point-person. The purpose of the meeting is for the auditors to describe their auditing and benchmarking methodologies, learn more about how Bluegreen and its IT department operate, and to discuss what Beauchesne wants to get out of the process.

The auditors—GIP founder Ted Williams, along with Gail Small and David Burkett (a fourth GIP auditor was not present for the meeting)—are impressed by the two-inch thick, three-ring binders that Beauchesne's executive assistant has delivered to them in preparation for the kick-off meeting. They contain six worksheets with a total of 96 questions that Small e-mailed to Beauchesne eight days earlier, as well as an organizational chart, descriptions of 17 different positions in Bluegreen's IT department, a list of business applications in use, descriptions of IT projects in progress—and information on staffing for the help desk, network support, server maintenance, application development and more. There are also numbers for desktop hardware and software, annual server failures, supported end users, desktops and laptops replaced each year, help desk call volumes and storage capacity. "We never get this level of organization," says Burkett.

Burkett estimates that 85 percent to 90 percent of the data-gathering component of the audit is complete and thinks the audit will be relatively easy. "Sometimes audits can be so complicated, the first thing I have to do is figure out an approach. I don't think we'll have that here," he says.

He'll soon find out that's not quite the case.

At 10:30 a.m., Beauchesne enters the room—having been delayed by a board meeting—accompanied by Parker.

Williams explains that GIP will benchmark Bluegreen against companies of similar size, with similar business objectives, that are above average or "top quartile" performers. GIP gets its comparison data by conducting informal surveys and by purchasing it from other benchmarking and IT research firms. GIP's database also includes information the company gathered in the course of previous audits.

Burkett then explains that he'll interview members of Beauchesne's staff and that he'll study purchase orders, invoices and reports from the company's accounting system. He also asks Beauchesne some questions, such as whether IT charges its costs back to the busi-

ness, how businesspeople view IT, and if her company has trouble attracting and retaining skilled IT workers.

Beauchesne tells him IT doesn't charge its costs back to the business, that there's no centralized accounting for IT spending, and that a chunk of the company's total IT costs are buried within Bluegreen business units. She says Bluegreen doesn't have trouble attracting or retaining workers, and that business and IT have a pretty good working relationship. Her answers will help inform GIP's analysis of and recommendations for Bluegreen's IT department.

Beauchesne mentions a few observations she's made in the six weeks since she joined the company. She thinks there's room for improvement in her four-person help desk. She wants to know how many calls that should be going to the help desk end up going to IT staff with whom Bluegreen business employees are friendly. She thinks Bluegreen's IT costs will turn out to be high due to the variety of desktop operating systems her department supports (Windows 95, 98, 2000 and XP). She suspects that Bluegreen doesn't spend enough money on new application development.

Overall, the auditors are looking to get a general picture of not only the numbers that make Bluegreen tick, but top management's attitude toward IT and the dollars attached to it. Williams notes that his firm is often hired by new CIOs who, like Beauchesne, want a baseline of their IT costs, and sometimes by CIOs who've been with a company for a while and need to fix an acute problem.

"It's not that we have things that are broken," Beauchesne says. "We know we have to do things better." She explains the company is growing and that IT has to grow with the business. "I want to make sure IT is facilitating everything the business wants to do. I never want to have systems be the reason that something has to be slowed down."

Krista Parker, Bluegreen's IT financial auditor, worked with outside auditors to get information (such as staff time commitments) that Bluegreen didn't track in the past.

Inevitably, Questions Surface

Once the introductory meeting concludes, auditors Small and Burkett stay in the room and begin analyzing the data Bluegreen has provided. They are searching for anomalies. Burkett keys numbers from the binder into a spreadsheet on his laptop and does "rough calculations" to validate Bluegreen's data and to make sure he understands it. Small jots notes into a spiral bound notebook. It doesn't take long before Burkett and Small begin to find discrepancies. Among them:

- Burkett thinks the figure Bluegreen provided for its desktop hardware budget is too small to be correct. Based on more than 30 years of experience in IT, he suspects that either the number doesn't include some PCs, or the company is running some very old PCs. Whichever, Bluegreen isn't spending enough. Burkett resolves to check the figure with Parker.

- Burkett thinks the figure Bluegreen provided for the total number of FTEs who develop new applications and maintain existing ones (30) should be higher than the number of FTEs who just maintain existing apps (49). In discussing the discrepancy with Parker, he realizes that the numbers she provided don't represent full-time equivalents—that is, the amount of employee time devoted to a particular function—but the number of employees who do that function on any given day. Burkett says smaller companies like Bluegreen generally don't measure staffing levels in terms of full-time equivalents. So, questions posed in that manner produce answers that are frequently a source of confusion. Parker tells Burkett that she'll have to ask the questions again to get a more accurate count of FTEs. Burkett was right to note this discrepancy. Final audit results show that 19.5 FTEs work on developing new applications and 13.1 FTEs work on maintaining existing ones.

- Small suspects that Bluegreen's estimate of potential help desk users (10) is incorrect. Knowing the total number of help desk users vis-à-vis the number of people who staff the help desk will help Small understand the burden the help desk is under, and why its service is less than stellar. Since the help desk was one of the areas Beauchesne singled out, GIP wants to make sure its assessment is sound.

■ Small is also skeptical of the time Bluegreen has provided for the average length of calls to the help desk: two minutes. She notes that two minutes isn't even enough time for a user to describe a problem or reboot. Williams speculates that if it is, indeed, two minutes, people are probably calling for password resets.

To clarify the two-minute issue, Small visits Gary Kaul, Bluegreen's manager of IT support, in his office.

Kaul tells her he has three FTEs; on average, he says, it takes a level-one help desk employee two minutes to open a trouble ticket and transfer the user to level-two support.

Small asks Kaul whether Bluegreen's help desk just answers calls or if it has other duties during down-time periods; how it handles requests to move employees, and provides phone and computer services for new employees (the help desk opens a ticket and sends it to a technician in the telecom group); if trouble tickets opened by a help desk employee stay with that person (no), or if they're assigned to someone else to resolve (yes); if the system Bluegreen uses to track calls also analyzes the reasons why calls come in (no); and if the help desk has established internal service levels (not yet).

Small is sensitive to the fact that some of the information Kaul provides is unflattering to his operation. During the course of their exchange, Small mentions several times that she does not mean to pass judgment and reassures him that his operation is like many others. The 30 minutes Small spends with Kaul gives her a clearer picture of the way Bluegreen's help desk operates and helps her shape her recommendations for improvement.

Clarification questions—such as the ones posed by Small and Burkett as they reviewed the binders—are routine and relatively easy to address. But one question that proves much less straightforward and more problematic is how Parker and the auditors will pinpoint the actual amount Bluegreen spends across the enterprise on desktop software, server software and specific pieces of hardware—such as desktop PCs, thin clients, laptops, servers and printers. The reason that question is so difficult to answer is because, says Burkett, "All acquisition costs are blended together whether they're for hardware, software or servers." In other words, Bluegreen doesn't track its IT expenditures in any detail. As a result, the auditors can't simply run a report off the accounting system to find out what the company spent on servers last year.

This lack of visibility into what Bluegreen actually spends on IT hardware and software threatens to undermine the audit. Burkett will have to do exactly what he didn't think he'd have to do: devise a way to calculate Bluegreen's enterprisewide IT costs.

The auditors of Global Information Partners (from left), Gail Small, Ted Williams and David Burkett, quantified Bluegreen's need for a new help desk system.

Audit by the Numbers

Time it took:
Seven weeks

Number of auditors:
Five (four external, one internal)

Size of Bluegreen's IT budget:
$5.2 million operating, $4.3 million capital

IT functions audited:
Application development and maintenance, help desk, network, telecom, desktops and servers

Size of IT organization:
60 employees

Two Ways to Calculate Costs

Using a whiteboard in the Bluegreen conference room, Burkett sketches two approaches.

The first uses a reference group composed of two public-sector organizations, one insurance company and two utilities. The concept is to use data from this reference group to fill in the blanks in Bluegreen's numbers. Where he doesn't have the information from Bluegreen, Burkett plugs in the reference group's averages for hardware and software costs. Burkett believes this approach will work reasonably well because he's not looking to determine costs that vary by company, such as employee salaries. Everybody buys their desktops, monitors, servers, laptops and other hardware from the same cadre of vendors—and it all costs pretty much the same.

The second approach is to use a Bluegreen call center in Indianapolis as a proxy for the rest of the company. Parker has lots of numbers on Bluegreen's IT spending in that call center. Burkett can then apply the call center prices to the rest of the company to determine Bluegreen's total hardware and software spending.

"We're basically using the same vendors companywide so the same costs would have been incurred regardless," says Parker.

Burkett plans to pursue both approaches and discuss the results with Beauchesne.

Counting Staff or Counting Functions?

During the next four weeks, Burkett and Parker communicate about three times a week via phone and e-mail, following up on questions and chasing additional data. On Feb. 24, Parker e-mails Burkett Bluegreen's data connectivity costs with MCI, reports indicating the amount Bluegreen spent on service contracts and on leasing equipment, and two Excel spreadsheets that Bluegreen used to track IT costs at the Indianapolis call center. Meanwhile, the auditors are also looking at the help desk and IT staffing levels in general. Small sends Kaul some follow-up questions by e-mail, which he answers promptly. But questions concerning the number of FTEs who perform various IT functions—how many level-one help desk support workers are there? how many workers develop new applications, maintain existing ones, or install and maintain network hardware?—prove difficult for IT managers to answer. They are accustomed to counting staff jobs in total, not by functions.

On March 8, three weeks after the first meeting, Burkett e-mails Parker to ask her to circulate a spreadsheet among the IT managers that he hopes will help them determine the number of FTEs devoted to different IT functions. Four days later, Parker sends the spreadsheet back and Burkett finally has his FTE figures. He now has the information he needs to tell Beauchesne whether she has enough people devoted to developing new applications and how her staffing levels measure up to the benchmark groups.

Still, certain numbers remain in question. For example, Burkett has two different figures from two sources for the total number of PCs in the organization. He's not 100 percent clear on how much the company spends on level-two desktop support. And in spite of Small's earlier efforts, questions remain about the help desk. Burkett plans a return trip to Bluegreen for March 16 and 17 to answer the remaining questions by interviewing eight of Beauchesne's IT managers and to present his preliminary findings to Beauchesne.

Audit Findings and Recommendations

Problems the auditors identified, and their recommendations for how Bluegreen should address them

Finding: Accounting system does not provide Bluegreen with enough visibility into IT costs to adequately manage them.

Recommendations: 1. Centralize all IT spending inside the IT department. 2. Generate reporting on depreciation costs associated with capital equipment.

Finding: Help desk is understaffed and needs to improve its service level.

Recommendations: 1. Devote additional resources to the help desk. 2. Monitor the reasons why end users call the help desk to determine if there's some root cause that needs to be addressed—such as the need for computer training among end users—that might reduce the number of calls. 3. Install a new call reporting and tracking system.

Finding: New application development efforts cost as much as existing application support.

Recommendation: Application developers need to interface more with business users, use more rigorous methodologies for developing code, and establish procedures for ensuring that new business applications meet or exceed the ROI established in the business cases.

Finding: Server uptime is below average.

Recommendations: 1. Discuss with business users their requirements for server availability. 2. Dedicate additional resources to identifying the causes of downtime and take measures to prevent it. 3. Implement software that will report on server performance.

Additional findings: 1. Costs to support client devices almost 50 percent lower than other organizations. 2. Thin clients are an efficient way to outfit end users, as long as they provide them with the functionality they need.

Additional recommendation: For both findings, auditors recommend developing an asset management system.

Ammunition for a New Help Desk

In a 40-slide PowerPoint presentation on March 17, Burkett presents his preliminary results to Beauchesne and Parker. Williams and Small call in for the meeting.

Beauchesne is pleasantly surprised by how low her monthly desktop, laptop and thin client hardware costs are. But she doesn't agree with the way Burkett has calculated annual hardware and software costs for client devices across the company. He used a blended rate, which means he used the average cost of all those devices. Beauchesne thinks he'll get a more accurate picture if he multiplies the number of desktops in the company by a desktop rate, the number of servers by a server rate, the number of laptops by a laptop rate—rather than multiplying the total number of client devices by a client device blended rate. Burkett agrees to recalculate.

Beauchesne notices a similar problem with the personnel cost calculations. Burkett used averages across three categories: management, administrative and professional. Beauchesne asks him to factor IT employees' and contractors' individual salaries and rates into his

equation for personnel cost. Burkett has reservations about handling such private data, so Parker volunteers to calculate average salaries in more general categories—such as help desk, server support, client devices support, application maintenance and application development.

Beauchesne is also concerned about Burkett's method for calculating server costs. He used the prices Bluegreen paid for computing equipment at the Indianapolis call center as a model for what the company pays elsewhere. But according to Beauchesne, Bluegreen doesn't pay a standard amount for all servers. The cost varies by the function and size of the server, and whether it's SQL, AS/400 or Windows NT. And since the servers Bluegreen has in Indianapolis are different from the servers at its resorts and at headquarters, the figures GIP obtained on server costs can't be accurate.

When Burkett presents Beauchesne with Bluegreen's total IT spending (not counting local and long-distance phone charges), the CIO becomes confused. She doesn't know exactly which IT costs are included in the number Burkett came up with and what could be missing. She asks Burkett if the number leaves out "all the maintenance fees that we pay on the software we have."

That's correct, says Burkett.

As for help desk costs, Beauchesne is delighted to see that even if she purchases a new help desk call-tracking and reporting system (which she's been considering), her help desk costs will remain below those of the reference group. (GIP figured cost of personnel per call and total cost per call. Bluegreen's total cost per call is more than 30 percent lower than the reference group of benchmark organizations.) This is information that she'll use when it comes time to request money to purchase a new help desk system.

Burkett concludes the meeting by offering some preliminary recommendations: Establish additional cost centers in IT for desktops, servers and the help desk to get more granular data on IT spending; track which users call the help desk most frequently to identify a cure for their calls, namely, more training or new equipment; and keep purchasing thin clients instead of PCs (provided end users are happy with them) because they're much less expensive than PCs to support. (See "Audit Findings and Recommendations," Page 33, for more of GIP's recommendations.)

He also goes over the additional data he needs to get before GIP can present its final report.

Bluegreen's CIO uses the audit findings to explain how the company's accounting system doesn't provide her with the visibility into IT costs she needs to manage them.

More Calculations and Benchmarks

Over the next two weeks, Burkett spends his time clarifying information pertaining to the help desk and the network. He speaks with Meg Johnson, Bluegreen's senior systems administrator, to get an idea of Bluegreen's AS/400 systems availability—which Beauchesne wanted him to factor into his report.

Assessing the help desk's effectiveness is more involved. To find out the number of help desk calls that are abandoned versus the ones that go to voice mail (information Bluegreen's phone system does not provide), Burkett asks Kaul if the help desk workers could count the typical number of voice mails they receive in an average day. The help desk employees counted, and Burkett was able to derive the number of abandoned calls.

Beauchesne also wants a better idea of how long it takes help desk workers to wrap up trouble tickets. So, again, Burkett asks Kaul if the help desk workers could track the amount of time it takes them to wrap up calls, and they provide Burkett with an estimate of five minutes.

He also nails down his calculations of the components of Bluegreen's IT costs and finalizes his comparisons with the reference group. To calculate the cost per help desk call, for example, he adds up the software, hardware, labor and training costs associated with the help desk, and divides that amount by the total call volume. To obtain Bluegreen's hardware and software costs for client devices, Burkett takes the prices Bluegreen paid for various types of software and desktops, laptops, and thin clients located in its call center in Indianapolis and multiplies those prices by the total number of, say, Gateway PCs and Dell laptops located throughout the company. Then he adds the costs of all those different pieces of hardware and software together to come up with the total amount Bluegreen spends on client devices.

In choosing comparisons for the benchmarking process, GIP auditors look for companies (and government agencies) with similar characteristics that provide high-quality IT services at a low cost. In some cases, GIP benchmarks a client against 15 or 20 organizations, but in most cases, fewer can still provide a quality sample for benchmarking. In Bluegreen's case, GIP found five organizations that were similar in annual revenue, number of employees, geographic complexity and IT centralization.

Burkett says the benchmarking process is fairly basic. Using Excel spreadsheets and a Microsoft Access database, he calls up information on the reference group's unit costs and FTE productivity and compares it with Bluegreen's cost and productivity data. He looks for discrepancies. For example, upon seeing that Bluegreen supports twice as many servers per FTE than the reference group, and that server uptime is comparatively low, he suggests that Bluegreen needs to dedicate more people to determine why the downtime is so high, and to invest in performance-monitoring tools.

Burkett sends Beauchesne an advance copy of the final presentation he plans for April 1. A couple of days before then, he walks her through the presentation in a conference call. On a graph that illustrates what portion of IT employees' time is dedicated to the help desk, Burkett uses the term "spare capacity" to denote the time they don't spend working on the help desk. Beauchesne is concerned that her managers might find the wording insensitive. Their time really isn't spare; it's dedicated to other functions. Burkett takes out the phrase.

What Bluegreen Wanted, But Didn't Get from Its Audit

Bluegreen didn't get everything it wanted from this IT audit. The process uncovered a need to track more details about how workers spend their time and dollars spent on software.

The total number of hours business users put into testing and developing new applications and how much that costs.

Bluegreen did not track enough specific information about discrete hours spent on specific tasks by different staff members and so it wasn't possible to derive this information.

The cost of managing Bluegreen's data centers.

Bluegreen didn't have enough detailed records about costs for software licenses and hardware purchases at all of its data centers to make this evaluation.

The Final Analysis: Bluegreen Is Getting What It's Paying For

On April 1, the group assembles in Bluegreen's sleekly decorated boardroom. Beauchesne, Parker and six of Beauchesne's direct reports file in. Her director of application development and senior manager of field operations call in.

GIP's Williams opens by paraphrasing Peter Drucker: "If you don't measure it, you can't manage it." He prefaces the slides Burkett is about to show by saying, "We're going to give you information you probably already know, validate some of your initiatives and provide you with new ideas." He allows that there may be inconsistencies, and encourages the group to discuss them as they go through the presentation.

Burkett takes over and explains how he used Bluegreen's Indianapolis call center as a model to determine total IT expenditures. Beauchesne interrupts to clarify. "We didn't act like every location was like Indy," she says. "We took the unit costs we paid for various pieces of hardware [and software] and applied that to what we have everywhere else."

"Overall," Burkett continues, "your costs are low compared to the reference group, but you're delivering somewhat lower-quality service. They're spending more; they have more people; they're able to deliver higher levels of service."

Burkett singles out two slides: One graph shows that Bluegreen IT employees support twice as many systems as the reference group; the other indicates that it costs Bluegreen half as much as the reference group to support client devices. He warns that although these slides may look positive, they could also indicate that Bluegreen IT is not doing some things it should—such as virus protection and asset management—and that could haunt them.

The best news for Beauchesne is that GIP characterizes Bluegreen's telecom rates as "very competitive." Bluegreen spends about $54,000 less annually than the reference group.

As Burkett goes through the slides and figures, he notes exceptions and caveats—such as where local and long-distance telephone costs haven't been included, and where business software hasn't been factored into enterprisewide IT costs. Burkett stops regularly to ask the IT staff for feedback and questions. Most of the time, mum's the word. But when Burkett broaches server uptime and quality of service, one of Beauchesne's remote workers pipes up that she thinks the numbers GIP has provided for server uptime makes Bluegreen look better than it really is. Beauchesne agrees, saying that 97 percent uptime isn't good, especially when compared with the reference group's 99.8 percent uptime.

The help desk, as Beauchesne suspected, also shows great room for improvement. Bluegreen's call abandonment rates are astonishingly high, topping out at 48.3 percent compared to the reference group's 4.6 percent. And it takes the help desk over a minute and a half to answer calls, almost double what it takes the reference group.

The Recommendations: Specialize, Centralize, Chargeback, Monitor

Because Bluegreen help desk workers are also tasked with setting up new equipment and loading software onto machines, the auditors recommend staffing up the help desk and to have those employees focus solely on answering help desk calls. The auditors also recommend that Bluegreen develop a help desk customer satisfaction survey.

Because total IT costs across the enterprise were so difficult to determine, GIP advises Bluegreen to centralize all IT spending and to consider developing a catalog of IT services, with standard prices and service-level objectives, for which IT could then charge the business.

The auditors also suggest that the IT department discuss requirements for server availability with the business. IT should identify root causes of server failure and install performance-monitoring software.

After about 75 minutes, Burkett wraps up. "Questions? Comments? Was it useful?" he asks.

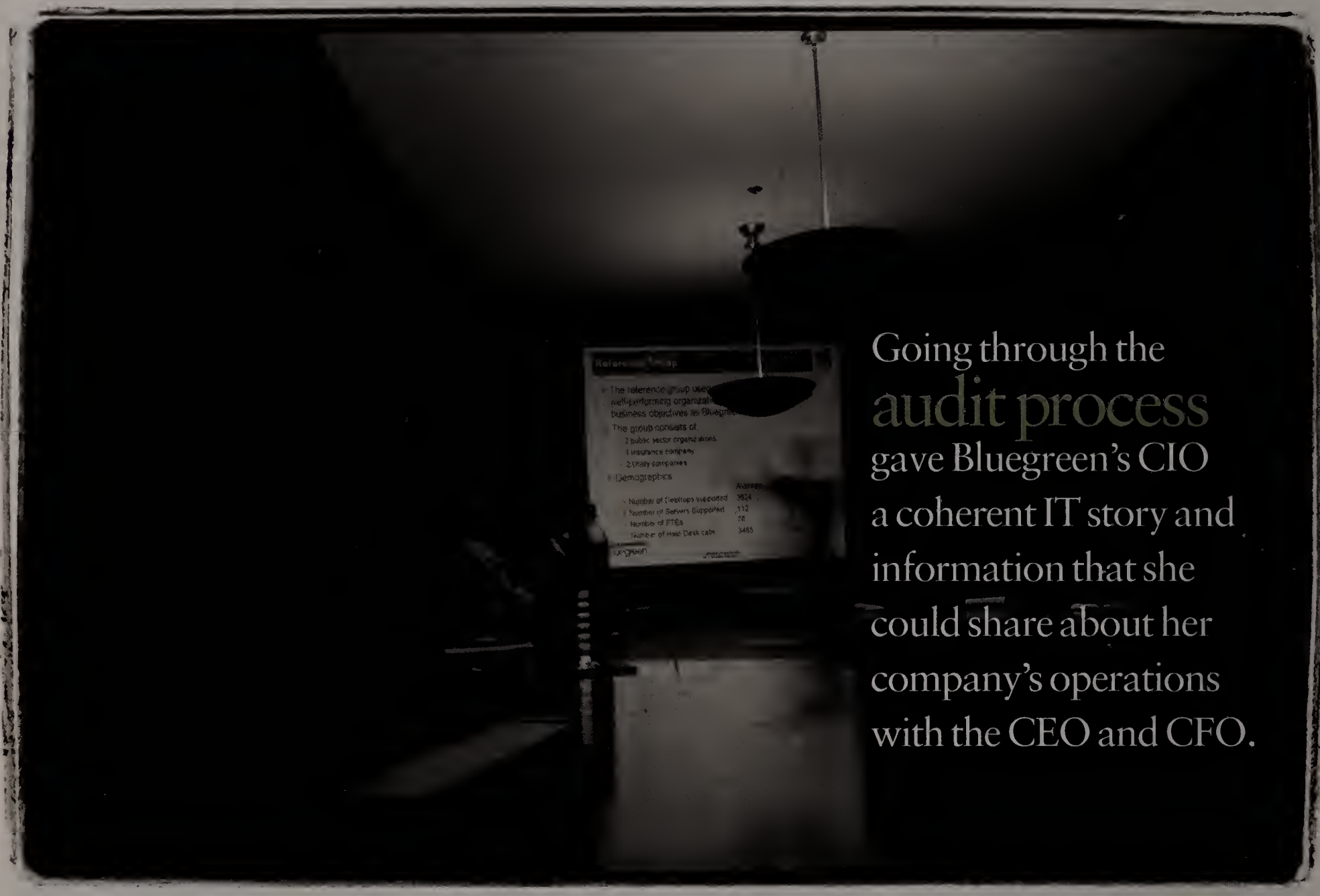
"I love you guys!" shouts one of Beauchesne's managers. He tells Burkett that the findings squared with everything he had ever thought about Bluegreen's IT operations. Another manager notes that Beauchesne can use the findings to justify additional IT spending.

"That's absolutely right," says Beauchesne. "I'm going to put together a summary of these findings and give it to my senior execs, and I'm going to tell them, 'This is what we need to do and, by the way, these things cost money. We've got to invest in these things, and now is the time to do it if we want to grow.'"

"Now," she says, "we have our baseline."

Epilogue: The Audit Does Its Job

Armed with the auditors' findings and recommendations, Beauchesne facilitates her first quarterly executive IT briefing on April 20. There she speaks with Bluegreen CEO Donovan, CFO Chiste and John Maloney, president of the company's resorts



Going through the **audit process** gave Bluegreen's CIO a coherent IT story and information that she could share about her company's operations with the CEO and CFO.

operation, who represents IT's primary business customers.

Beauchesne begins her PowerPoint presentation by emphasizing that the numbers come from an objective third party. And she includes all of GIP's recommendations. "I didn't want them to think that I had weeded out the recommendations I didn't like," she says.

GIP's findings lead to a discussion of the state of Bluegreen's IT and what projects it should undertake and what staff it needs to hire. Using the auditors' slides, she shows how, compared with the reference group, Bluegreen has fewer employees supporting Windows servers and the help desk; and how, as a result, server uptime and end user support suffer.

She explains how the company's accounting system doesn't provide her with the visibility into IT costs that she needs in order to manage them, and how an asset management system would allow her to obtain a more accurate total cost of ownership model for IT and would improve service on the help desk.

Donovan wants to know how many servers, desktop computers, laptops, thin clients and field locations her IT group supports. Because she has just been through this drill with GIP, Beauchesne knows the answers cold. And by providing her CEO with the numbers (72 servers, and 1,646 desktops, laptops and thin clients in 97 field locations), she's able to give him a better idea of how Bluegreen's growth has affected IT and of the challenge to meet future demand for IT services.

Donovan also wants to know what happens to end users who never get through to the help desk and why Bluegreen's help desk cost per device is higher than the reference group's. Beauchesne explains that in some cases end users who can't reach the help desk try to deal with their problem on their own, and in other cases, they call someone they know in IT. She says the help desk cost per device is high because the company supports a lot of old equipment and a variety of operating systems.

By the time the 90-minute meeting is over, the CEO and CFO approve Beauchesne's request to hire two field tech support employees, two help desk technicians and one network engineer. They also authorize the purchase of a new help desk and asset management system, which had not been in Beauchesne's 2004 budget.

She also gets the CFO to understand that she needs better reporting capabilities from the company's accounting systems. They agree that Parker will work with someone from accounting to come up with the best way to provide IT with the information it needs to track IT costs.

Beauchesne says the audit enhanced the confidence she felt going into the meeting. "I felt I had a story that made sense, that I had all the information I needed." And because she accomplished so much in that meeting, she's on her way to transforming Bluegreen IT. CIO

Send feedback to Senior Writer Meridith Levinson at *mlevinson@cio.com*.

WE'RE PUTTING COMPUTER R&D WHERE IT BELONGS.

In your business.

Dancing robots and Artificial Intelligence make great press release material, but what exactly do they do to improve your business?

At Fujitsu, we're concerned with R&D that helps CIOs run their business more efficiently. In fact, we invest billions of dollars annually in developing technology solutions and providing the right products for our customers to achieve maximum enterprise performance. This R&D effort is the foundation of the Fujitsu PRIMEPOWER™ and PRIMERGY® server lines, which deliver mission-critical reliability, availability and serviceability.

Thanks to our real-world R&D philosophy, we've become a company that offers CIOs the high-performance mobile computers, scalable, reliable servers, and managed and professional services they need.

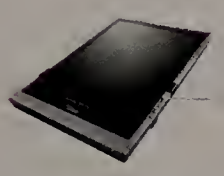
If you are looking for an IT partner whose R&D investment actually does your company some good, visit **us.fujitsu.com/computers/RD** or call **1-800-831-3183**.

FUJITSU

THE POSSIBILITIES ARE INFINITE

PRIMEPOWER™ Servers

LifeBook® Notebooks



Stylistic® Tablet PCs

PRIMERGY® Servers

©2004 Fujitsu Computer Systems Corporation. All rights reserved. Fujitsu, the Fujitsu logo and LifeBook are registered trademarks of Fujitsu Limited. PRIMEPOWER is a trademark or registered trademark of Fujitsu Limited in the United States and other countries. Stylistic is a registered trademark of Fujitsu Computer Systems Corporation. PRIMERGY is a registered trademark of Fujitsu Siemens Computers GmbH.

Tips From the Budget Masters

Assembling a budget? Keeping it balanced? That's just the beginning. Three CIOs talk about using the budgeting process as a management tool to make their organizations successful.

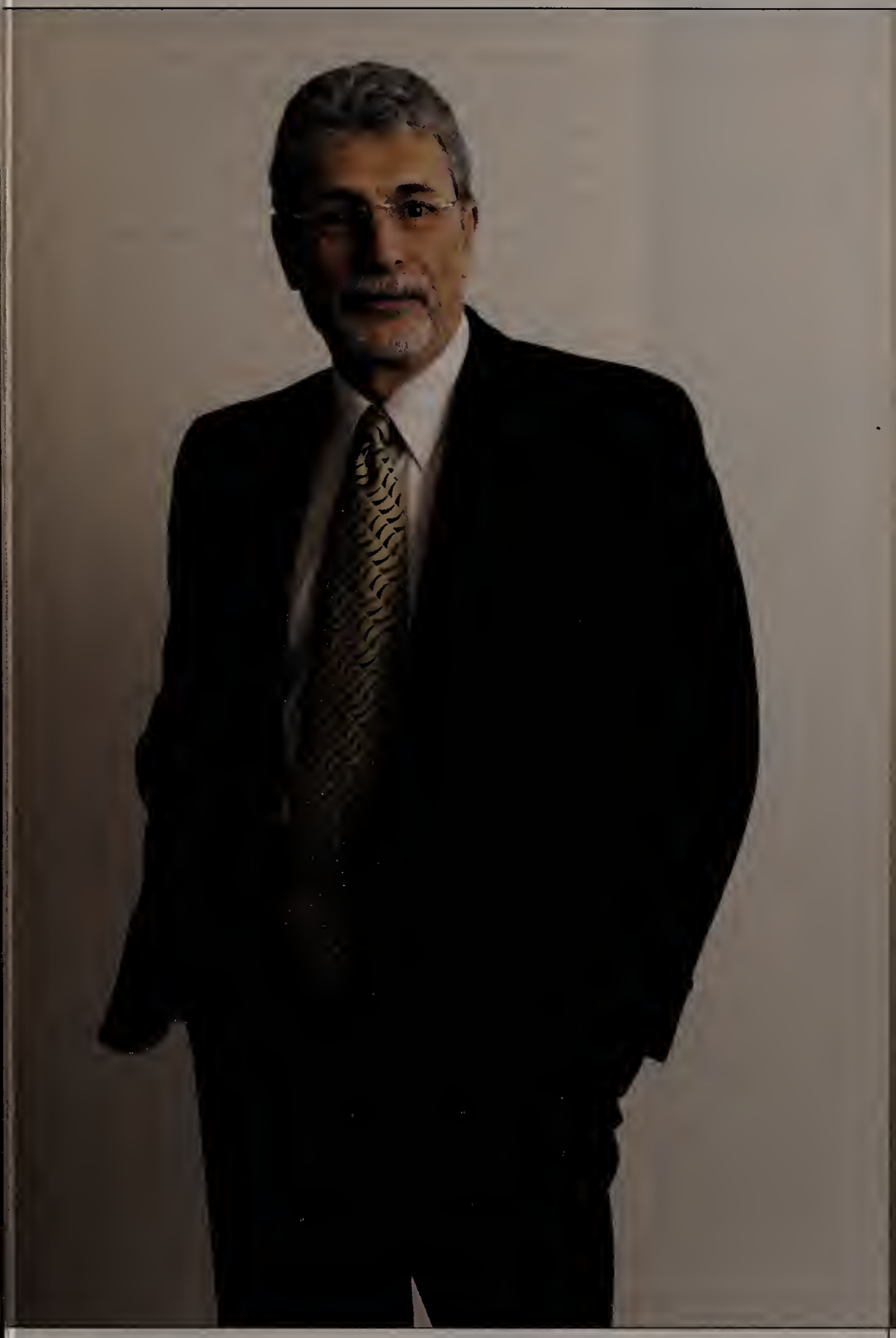
BY STEPHANIE OVERBY

Jan Franklin, former Farmers Insurance CIO, learned to manage demand for IT.

Reader ROI

- How to establish a budget process that identifies priorities
- How to manage rising demands for limited IT resources
- How one public-sector CIO centralized IT spending

Creating and monitoring an IT budget is table stakes among CIOs. What separates the winners from the also-rans is managing well what makes it into and comes out of that IT budget, and the process for making those choices. ■ If you think of IT governance as MIT's Peter Weill defines it—"the decision rights and



Las Vegas CIO Joe Marcella had to play politics to centralize IT spending.

CIO Tim Shack uses benchmarks to evaluate spending levels at PNC Financial.

PHOTOS LEFT AND CENTER BY MARK ROBERT HALPER; RIGHT BY BILL CRAMER

accountability framework to encourage desirable behavior in the use of IT"—then the necessity of good governance in effective IT budgeting makes sense. It means codifying processes that decide project priorities, that cut expenses here to boost funding over there, that mandate ROI estimates on IT investments, that analyze risks, that manage ongoing project costs against budget plans. Making these processes an ongoing part of operations is what elevates budgeting from a straightforward math exercise to a blueprint for fiscally sound IT and business success.

Decision-making processes are paramount. "IT budgeting is a subset of a good governance process," says Michael Gerrard, chief of research at Gartner. "And the better that governance process is, the less IT budgeting is an issue."

We talked to three CIOs in very different organizations facing some of the most common IT budgeting dilemmas. Tim Shack of financial services giant PNC Financial reveals the strategies for benchmarking, portfolio management and rate of return calculations that have enabled him to transform IT from a pure cost center into a hub of innovation. Joe Marcella, CIO of Las Vegas, the fastest growing city in America, imparts the lessons he learned in tackling budget centralization, one of a CIO's trickiest budgeting tasks. And Jan Franklin—a Zurich Financial Services executive, former CIO of Farmers Insurance and self-described budget buff—shares her secrets to managing the insatiable demand for IT while driving down costs.

Squeezing IT Utility Costs to Pay for Innovation

PNC FINANCIAL
Revenue: $5.3 billion (consolidated revenue)
Employees: 23,500
IT budget: $450 million to $500 million (45 percent operating; 55 percent capital)
Budget challenges: Increasing funding for strategic investments; prioritizing strategic investments
Solutions: Benchmarking and cutting costs of IT operations to divert to strategic investments; portfolio management; calculating internal rate of return versus traditional ROI
Results: Decreased expenditure on ongoing IT operations; continued investment in strategic and value-added IT projects during economic downturn

The IT budgeting process at PNC Financial is a mature model of IT investment. Early each year, CIO Tim Shack meets with his direct reports to update the organization's five-year strategic plan. Early in the third quarter, the IT leadership takes that five-year strategy and develops its one-year operational plan. And in the fourth quarter, Shack's team partners with each PNC business unit and works through multiple revisions of its annual budget, transforming it from a technology pipe dream to IT reality. "You start out with people identifying everything we could possibly do in the next year, and we work with our business partners to figure out what we can actually afford and execute on, and finally we come up with something that makes sense," he says.

Throughout the year, Shack holds monthly meetings with his corporate technology leaders and CIOs who head up each of PNC's five business units to discuss actual expenses and deliverables versus those budgeted. The IT team meets with business unit CEOs quarterly to discuss progress on its IT project portfolio, comparing it to the budget. Project managers and key business sponsors meet regularly to review the scope and budget of ongoing projects.

Shack's goal for his IT budget is to cut costs in one area of the budget—the computing utility (data centers, networks, storage and other operational costs)—so that PNC can pump up IT's spending on strategic investments, such as online trading and CRM. Making this utility run better, he says, allows the company to "divert an increasingly larger component to things that actually make a difference to the business."

In fact, it's the only way that PNC has been able to invest in strategic IT projects at all over the past few years of economic decline. During that time, Shack was able to fund an integrated, online CRM tool used by PNC's regional, wholesale and private banks; a new financial reporting system; and software that enables online processing of trades.

Tim Shack's Budget Tips

1. Benchmark at two levels: Check your costs against companies of a similar size to see where costs could be lowered, and compare your own IT financial performance year-to-year.
2. Use internal customer surveys to make sure cost-cutting doesn't negatively affect service levels.
3. Allow time for repeated revisions of the initial IT annual budget.
4. Implement project management methodologies to keep IT projects on track with the budget.

To figure out what piece of IT operations might be delivered more cost-effectively, PNC measures its data center against Gartner Measurement data collected from similar-sized companies. "We typically have fared pretty well in the top 5 percent or 10 percent. We might have more disk storage than most companies our size and we need to take a look at that," Shack explains. "The thing that's important is not so much what specifically we find, but that every year we find areas of opportunity." To ensure that cost-cutting doesn't impact service, Shack conducts an internal customer survey. After examining the findings, Shack challenges each IT group to make their operations more cost-effective.

For example, such an auditing team was able to cut $50 million out of the operating budget of PFPC, a business unit that provides mutual fund services to the investment managers. It transferred the business unit's data center and network infrastructure operations to PNC corporate, renegotiated several IT contracts and eliminated redundant systems.

A good portion of that multimillion-dollar cost savings was funneled into a new open architecture that integrated legacy systems with new software to run the fund services unit. Shack says the more flexible system has improved security and increased time-to-market cycle times for new applications while lowering costs.

During the past five years, Shack has been able to invert his budget's priorities. Where PNC once devoted close to 60 percent of its budget to "just staying alive" and about 40 percent to strategic initiatives, it now spends 55 percent on strategic initiatives and only 45 percent on keeping the IT lights on. Shack expects to be able to shift that ratio even more in favor of IT strategy in the future.

What's done with that 55 percent of the budget is also a focus. Every project that costs more than $100,000 or involves a major change in business processes gets a thorough review. To whittle away at the requests, PNC assigns a project champion to justify a potential initiative as a matter of regulatory compliance, a revenue-generating or expense-reducing opportunity, or competitive advantage.

Costs, Benefits and Rates of Return

Business sponsors must also work with IT to quantify what the costs and benefits of the proposed investment are. Since it's hard to wrap an ROI around some strategic investments, they often use discounted cash flow analysis (which estimates future cash flows from the project and takes into consideration the time value of money) to come up with a required internal rate of return. If a project is expected to surpass this rate of return,

PHOTO BY BILL CRAMER

the investment makes sense. The formula is different for each of the business units based upon a business-specific yield curve. "As we go through the project lifecycle, we refine it," Shack adds.

These calculations led to PNC's investment in the Lotus Notes e-mail distribution system in 1997, "before we would have been able to realize the full implication and potential of the technology," says Shack.

Similarly, an enterprisewide check imaging system (implemented by two separate business units in 1996 and 1999) was put off for years because it failed to meet rate-of-return requirements. This year, it finally made the budget. "It wasn't until this year that the costs had come down and the benefits had [risen] to the point that fully funding check imaging technology enterprisewide was justified," Shack says.

Projects that make it past this stage go to the CFO for approval, and if given the green light, become part of PNC's IT project portfolio. Then IT project managers use company guidelines to set a budget based on the project's expected lifecycle.

"If you use these formal methodologies, you can be more accurate in your budget estimations, and the ultimate deliverables are more predictable," says Shack. "It's all about partnering with the business and telling them what you're going to do, what it's going to cost, how it's going to work and when you'll get it done."

Winning Support for a Centralized IT Budget

CITY OF LAS VEGAS
City budget: $940 million
Employees: 2,800 regular; 400 seasonal
IT budget: $10.7 million (62 percent operating; 38 percent capital)
Budget challenges: Centralizing the IT budget; getting elected officials to fund strategic IT investments
Solutions: Using enterprise funding to jump-start the first central IT budget; providing ROI elected officials understand
Results: The least IT systems expense per capita of almost any city; the ability to manage city growth while keeping a cap on municipal hiring

Las Vegas is known for slot machines, showgirls and steak-and-seafood buffets. But starting in the 1990s, the tourist magnet began to attract long-term residents—more than half a million and counting. Today, the fastest growing area in the country welcomes up to 6,000 new residents a month. Builders spend $4 billion a year on new construction. Every week, motorists register 750 new vehicles.

But ramping up on municipal employees to accommodate the increased demand for city services wasn't possible. Over the past few years, the city's salary obligations have climbed faster than revenue. With a hiring freeze in place, city management began seeking out IT-enabled efficiencies to meet the demand for services. Seven years ago, city officials split MIS from finance to create an IT department and hired Joseph Marcella to be Las Vegas's first IT director. Marcella was charged with what many CIOs call the bane of IT finance: creating a centralized budget.

Such a challenge is not limited to public-sector CIOs. During the dotcom era, eager business managers began their own e-commerce projects, and "it was difficult for a CIO to know how much spending was going on," says Gartner's Gerrard. It was even more difficult to put any governance controls on that IT spending. Yet, the CIO was responsible for the success or failure of all IT efforts.

Today, organizations such as the city of Las Vegas rely on a central CIO figure, says Gerrard. "But it's still difficult to figure out what is being spent where. You can look at the general ledger or charts of accounts, but they give no real visibility," he says.

In Las Vegas, there was also a political challenge: convincing the city's 15 department heads to hand over their technology budgets. "Creating the IT department was one thing," says Las Vegas Finance Director Mark Vincent. "But in terms of budget, the fire chief was king of his domain; the director of leisure services was queen of her domain, and so on."

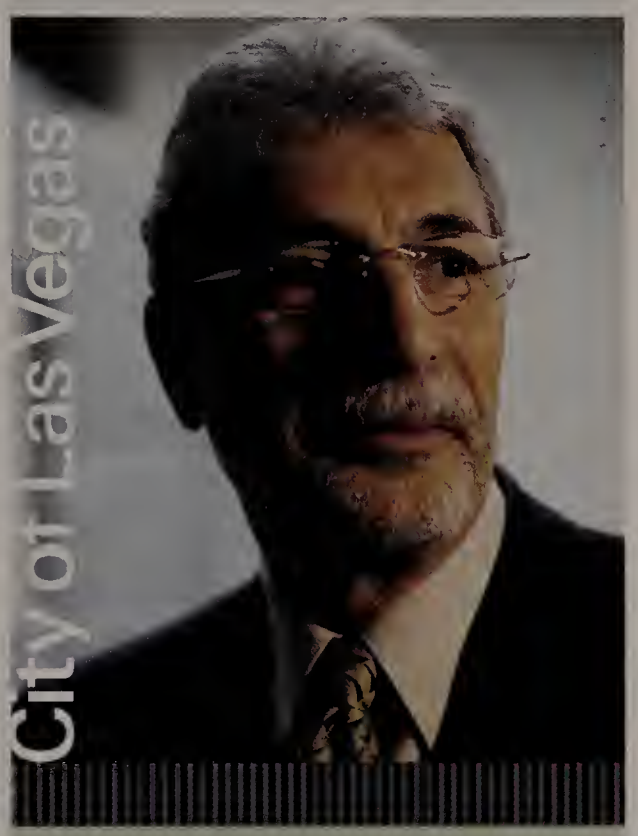


PHOTO MARK ROBERT HALPER

Joseph Marcella's Budget Tips

1. Articulate ROI in terms IT customers understand.
2. Earn increased budget funding through effective IT delivery.
3. Use executive support to encourage budget centralization.
4. Budget 10 percent more than estimated for large projects to cover potential contingencies. If project does not go over, return that 10 percent for other projects.

Results Convince Reluctant Customers

As a budget control battle loomed, Selby made it clear that he wanted city government to invest in ERP to help manage growth. The Oracle system would be a multimillion-dollar investment. But with a new IT department unproven, none of the city's department heads would pony up. Still, Marcella believed if the ERP system succeeded, it could persuade reluctant managers to bet on the new IT model and budget.

So Marcella took a different tack to pay for it. During the 1990s, Las Vegas had accumulated tens of millions of dollars (about 16 percent of annual general fund expenses) in a de facto rainy day fund. Marcella requested some of that money, normally reserved for unexpected costs or new construction, for IT. The city council signed over $4 million to jump-start the ERP implementation.

Today, the city has implemented Oracle's Financial, HR and Payroll modules. Among the results have been a 14 percent reduction in finance staff despite a 5 percent increase in transactions, the ability to close the books in seven days as opposed to 30 or more, payment of vendor invoices within 30 days rather than after six weeks or more, and an 84 percent reduction in the amount of paper being used in city build-

ings. As department managers noticed the benefits and realized that there was no reason for them to be doing their own IT, Marcella notes, IT budget centralization gained momentum.

Some departments were slower to sign on than others. The system that runs the sewer plant, for example, didn't integrate with the ERP system. Eventually, the department's chemists found themselves spending more time dealing with an inefficient IT system than their real work: waste water treatment. "I'd been eyeing that for a while, and finally in the last couple of years the public works director said, Will you take my IT function and budget?" Marcella recalls. "Sometimes it just takes a lot of pain and suffering."

Marcella is now moving Las Vegas IT from being dependent on the city's general fund for capital IT investments to an internal IT services fund chargeback model. It's a simple system: If a department uses an application, for example, it pays proportionally to the number of users in that department. Marcella tries to build an internal services fund balance of 3 percent of the total charged back, to use for software and hardware upgrades, and installing or salvaging computers in places like the leisure services department, which runs recreational programs (and lacked PCs).

As for new enterprisewide projects, such as a system being implemented to manage building inspections, business licensing and sewer billing, the departments that benefit are beginning to fund the IT capital improvements budget, beginning with the public works department. There's no rogue IT spending. "If it has a flashing light or causes a paper cut, the dollars are all handled by IT," Marcella jokes.

Talking Computers and Swing Sets with the City Council

Dealing with department managers is just one piece of Marcella's job. There's also the politics of winning IT budget approval from the city manager and the seven-member city council. That six-month process starts in December. Each department, including IT, develops a budget that supports goals set by the council. Budget requests inevitably exceed available resources, so Marcella must go through meetings with the city manager and individual departments to narrow his budget requests. In May, department managers attend two public hearings before the council to determine which requests will get funded for the new fiscal year. "Trying to tell your constituents that you'd rather spend $10 million on an IT system versus a new park in their neighborhood is a tough sell," says Vincent, the finance director, who makes IT budget recommendations with input from Marcella. "You have to be able to educate them on the ROI."

Marcella recalls that he had one councilor ask him, "Why should I spend this money for a computer when I could spend it on a new swing set?" Marcella could have mentioned how Las Vegas is using IT to become more efficient, how the city spends just $20 per citizen for IT versus the national average of $28. Instead, Marcella said, "Let me spend this couple of dollars on the computers, and we can buy you 10 swing sets."

Jan Franklin's Budget Tips

1. Establish strict rules to manage IT demand from the business.
2. Create a three-year strategic plan for IT investments.
3. Put controls in place to put a cap on capacity-based IT budget items.
4. Require a business case for all IT budget items—even ongoing operational support.

Spending the Right Dollars at the Right Time

FARMERS INSURANCE
Revenue: $11 billion (in written premiums)
Employees: 19,000
IT budget: $300 million (70 percent operating budget; 30 percent capital investments)
Budget challenges: Insatiable demand for IT; business reluctance to invest in legacy replacement
Solutions: Demand management system; five-year strategic information systems plan
Results: Reduced IT budgets while providing more IT man-hours to the business; met or exceeded internal SLAs

Jan Franklin loves to scrutinize budgets. "It's ingrained in who I am," says Franklin, who has worked for Farmers, known for its cost-conscious "staple counters" reputation, since she was a 17-year-old keypunch operator. "We watch for people buying the $10 pencils." In August, Farmers' CIO Franklin was promoted to global account executive, ASP outsourcing at parent Zurich Financial Services.

Inside Farmers' IT department, informal auditing flourishes. Each rung on the IT management ladder pores over expenses and invoices each month, with an eye to trimming the fat. And the IT equivalent of the $10 pencil is not even available in the corporate catalog. But Franklin knows penny-pinching will go only so far. Her biggest challenge: the insatiable, ubiquitous demand for IT.

Demand comes from the dozens of internal departments, from marketing to finance to HR, and from three major business units—Farmers Insurance Group, Farmers New World Life and Foremost Insurance Group—each with its own product lines (such as personal, life, specialty insurance). Each department, each line of business, each office has its own IT support requests. But Franklin's 1,400-person IT department, with its own mandate to shrink spending, can handle only so much.

That's why demand management is at the heart of Farmers' IT budgeting process. Demand management means working with IT's business partners to examine the business case for each potential investment. The parties then review the list to prioritize those investments based "on which will provide maximum value to customers," Franklin says. Done well, demand management reduces the perceived need for IT services and lowers

PHOTO BY MARK ROBERT HALPER

IT utilization. It cuts IT costs while maintaining quality and improving customer satisfaction. "The purpose of demand management is to ensure we do the right things for the right reasons at the right times," Franklin says.

Demand management is an emerging practice in IT budgeting as more CIOs focus on it as a tool to guide the budget decision-making process, says Gartner's Gerrard. There's a positive correlation between companies effectively using specific governance tools such as demand management, and several average three-year measures of company performance such as return on equity, according to a 2002 study by the MIT Sloan Center for Information Systems Research and Gartner.

Return of the Five-Year Plan

Franklin discovered the importance of demand management when she took over as CIO in 2003. Corporate goals were clear: cut costs and increase productivity to increase profits, boost the quantity and quality of agents, grow all lines of business (commercial small business, workers compensation, financial services—plus auto, home and life insurance), and improve customer service and retention. But how do you use IT to get there? The company may want to see auto policies grow, Franklin says, "but there are thousands of IT projects that could potentially enable us to do that, and we have to figure out which will give us the biggest bang for the buck."

Franklin levels the playing field for competing priorities by applying her flavor of demand management to both base support (maintenance, compliance and regulatory requirements, and system enhancements) and what she calls the project category, driven by the three-year Strategic Information Systems Plan (SISP), created by Farmers' IT governance board. (One area where demand management isn't applied is production support needed to ensure that the applications and systems meet service-level agreements, Franklin says.)

Farmers first used the SISP for IT back in 1990 to outline IT department goals and plan projects to meet them. The SISP process fell by the wayside in the late 1990s before Franklin reinstituted it in 2001, when she was vice president of applications development.

Franklin requires a business case for every budgeted item, ongoing operational support included. When it comes to the enhancements—from a Web-based system to a quality management change to an ERP system—the demand control goes further. All changes to IT systems are capacity-based, and she schedules the use of IT's limited capacity in monthly chunks.

Each time the business requests a system change, that request is imported into IT's release management governance system, which schedules the monthly release of capacity. Each of Farmers' three major business units gets only a specific number of hours per month of capacity. As a result, says Franklin, "a lot of stuff gets thrown out." It's a way of controlling the demand for IT resources, including available staff time. Items that do not make a given release typically have lower business cases, can be manually processed for less than what it would take to automate, or do not have mandatory compliance schedules that would require them to be added at the time, Franklin says.

On the project side of the budget, demand management comes down to prioritizing IT budget investments based on potential value to the company. A hypothetical example, Franklin says, is to consider that the same 1,000 hours of IT work could go to updating software systems for auto insurance policies in Texas, or to meet a regulatory change due in two years, or to enhance documents to retain more customers. Franklin works with leaders of business units, departments and product managers to make these decisions, weighing factors that could include government mandates and the strength of business cases.

> "There are thousands of IT projects that could enable us" to meet our business goals, says Jan Franklin, former CIO of Farmers Insurance. "We have to figure out which will give us the biggest bang for the buck."

The long-term SISP, though not popular with the business community, helps Franklin figure out what to fund. "They think it's too bureaucratic and onerous; they may not like it, but it creates a much better output," says Franklin. "We manage so tightly that we never miss our budget." And the overall effect, Franklin says, is that project champions know they have to present a strong business case to win budget backing. There are no more ad hoc projects.

In addition, Franklin has been able to reduce the IT budget significantly over the past couple of years through productivity increases and labor arbitrage (mostly through offshoring 250 development and maintenance jobs) while increasing IT capacity.

But one sore spot remains: finding money for legacy upgrades, and hardware and software consolidation. "We're a 75-year-old company with lots of legacy applications. There's a lot of opportunity to do some reengineering of our legacy systems and do some product consolidation in general," Franklin says. "But those things tend to get put off year-to-year based upon the sheer amount of money it would cost to fix them and the fact that it would take several years."

Franklin has seen some modest success in this area, since reviving the SISP. "We found that we were working on a lot of tactical projects and not looking far enough ahead," Franklin recalls, and the payback for reengineering legacy systems can take three years. For example, in 1999 when Farmers acquired Foremost, the acquiree was running on a different IT platform, and merging the two was a short-term loser as an investment. "Now we can look more long term to prepare for applications and systems that may happen two, three years down the road," she says. "It's the same thing the business does. They're not just planning for tomorrow or creating objectives for this year; they're looking long term." CIO

E-mail Senior Writer Stephanie Overby at *soverby@cio.com*.

The Dollar

Wherein an imaginary dialogue between a CIO and a CFO identifies, analyzes and suggests strategies to resolve the long-standing divide between money and technology

BY SCOTT BERINATO

Introduction

In the lobby of LargeCo's corporate headquarters

CIO Harold R. Peeples Hello. I'm Harold R. Peeples, CIO of LargeCo Inc.

CFO Ben Courtanes And I'm Ben Courtanes, LargeCo's CFO. We should probably begin by telling the readers that we're not real.

CIO That's right. We're a literary device being used to illustrate how a CIO and a CFO can have a frank conversation about their differences and biases. Sadly, real CIOs and CFOs don't always do this.

CFO Yes. There's a communication gap between my office and yours. Some people have even called our disconnect a credibility gap. And when it comes to your department, I can see why they'd say that.

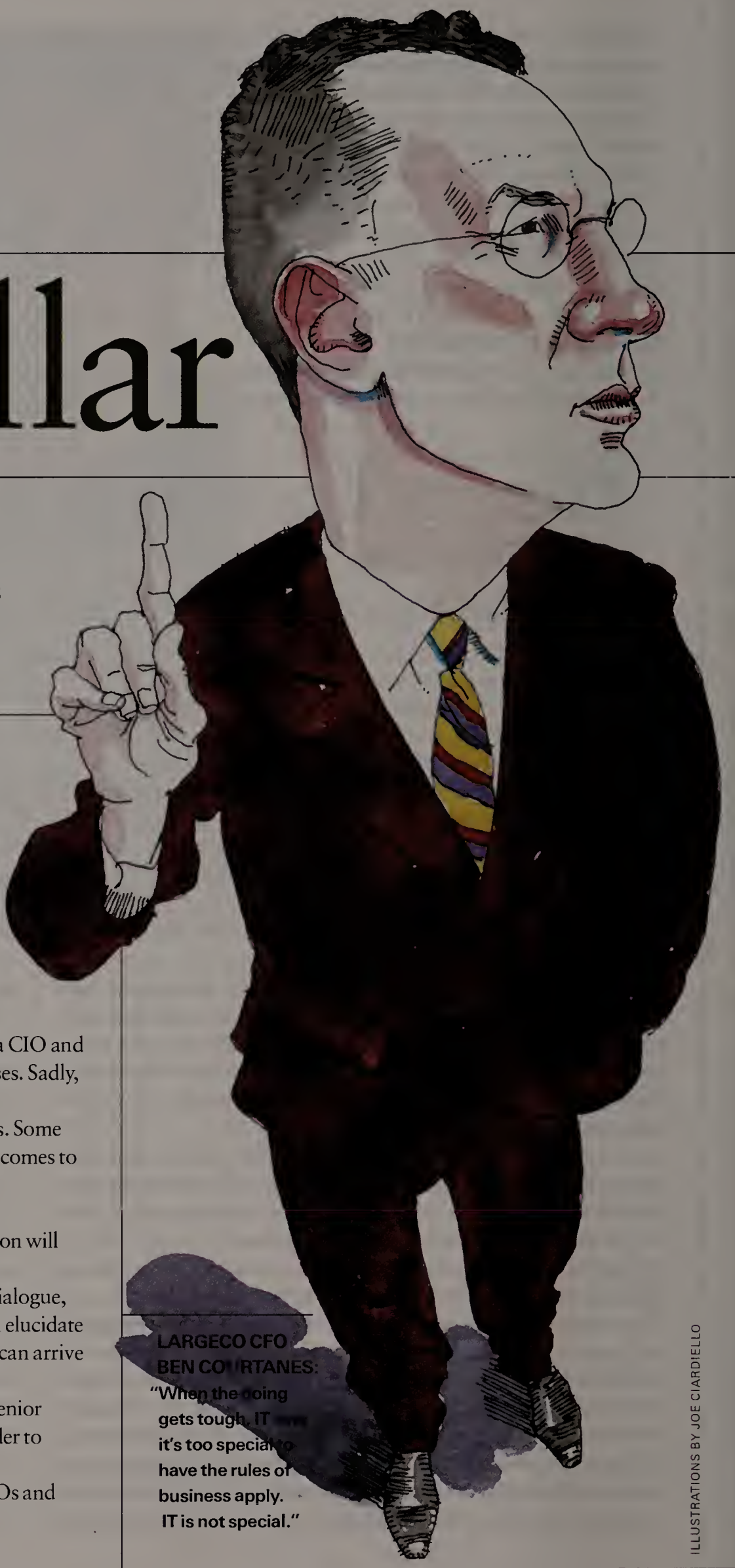
CIO Are you saying IT's not credible?

CFO Save it for the dialogue, Harold. Oh, that's right, our conversation will loosely follow a method called Socratic dialogue.

CIO We won't bore everyone reading this with the rules of Socratic dialogue, since we break most of them anyway, but the idea is to let each person elucidate his own point of view, based on his experiences, so that together they can arrive at some common ground.

CFO And while we're imaginary, the business cases we cite are not. Senior Editor Scott Berinato interviewed a number of CIOs and CFOs in order to identify the issues that divide them. Is that everything, Harold?

CIO Yes, Ben, that's basically it. We hope our discussion here gets CIOs and CFOs talking out there, in the real world.



LARGECO CFO BEN COURTANES: "When the going gets tough, IT it's too special to have the rules of business apply. IT is not special."

ILLUSTRATIONS BY JOE CIARDIELLO

Dialogues

On IT Project Failure

CFO Ben Courtanes The first thing I'd like to talk about, Harold, is IT project failure.

CIO Harold R. Peeples Well, that's a gloomy way to begin, Ben, but, OK, go ahead.

CFO Numbers don't lie, Harold.

CIO Spoken like a CFO, Ben.

CFO Be that as it may, the Standish Group's numbers have shown that IT projects fail a lot, and that the bigger the project, the more likely that'll be the case. This has been true for decades. Can you blame me for being skeptical about IT?

CIO It really depends on how you define "fail," doesn't it? I mean, just because a project misses a few deliverables, or has to be changed after it's deployed, that doesn't necessarily make it a failure. Maybe it's just less than perfect.

CFO I'm not looking for perfection. But what you call less than perfect, the Standish Group calls challenged. Those projects end up with fewer features than you promised, they cost more than you said they would, and they take longer than you expected. That puts me in a bad position. If we pull the plug, we've wasted millions. If we don't, we risk wasting more.

CIO That's a Hobson's Choice, Ben. I don't think we've been in that position here.

CFO We're in that position right now with the wireless project. Your proposal promised all sorts of ROI for adopting a wireless network. You said we could save on networking costs and get more productivity because our workers could access the network from anywhere. But it hasn't worked out, has it?

CIO OK, there've been issues. But by doing that project now, we're leapfrogging to next-generation technology. And we'll save money at the same time.

CFO We will? When? After we've spent twice what we planned?

After the project started, you told me there was a problem because our buildings had steel in them. It interfered with the signals. So I come in one morning and we're tearing down walls. To date, that has cost an extra half-million. The whole thing's been going that way. Your support costs turned out to be twice what you said they'd be because you had to fix a security hole in the wireless protocol.

Even if this thing does save us money down the road, all these extra up-front costs have to be figured into the ROI. You can't just tack them on and pretend they don't affect us. When you say a few deliverables will be missed, I hear someone changing the business case on the fly. When support costs go up, I have to take money out of someone else's pocket. When you find a security hole, I see the risk profile changing completely.

CIO But, Ben, this is the nature of software projects and, frankly, it's an inherent feature of

LARGECO CIO HAROLD R. PEEPLES: "If I'm spending all my time trying to get numbers to justify my existence, how am I supposed to focus on the projects that'll help LargeCo make money?"

any big challenge. What about when we take on a big merger? Remember when we acquired UpandComing Co.? That started out as a happy story about synergies and complementary product lines. But after it was finalized, we started hearing about cultural differences, branding conflicts. That project didn't come off exactly as you hoped it would, either.

CFO Point taken, Harold. Then again, we actively attempted to minimize the risk from the beginning. We created detailed risk models. We evaluated operating costs. We estimated market shares, workforce overlap.

CIO Software projects are different. They pose hard-to-measure risks and sometimes offer hard-to-measure returns. We're dealing with an imperfect science here.

CFO Imperfect yes, but also largely predictable. Lister and DeMarco's book on software risk, *Waltzing with Bears*, boils it down to the same five major risks for every project. They even built risk curves for them.

CIO I know. I read it.

CFO I'm not asking you to make IT projects fail-safe, Harold. That would be as foolish as you asking me to always keep the stock going up. What I'm asking for is a lot more discipline, especially up front. To measure risk. To consider all the forces that might affect a project, not just the ones from within your own silo. Think of it this way: Replace the word *project* with the word *product*. Would an automaker tolerate one recall for every three cars it made? What if half of Mrs. Fields chocolate chip cookies crumbled before you could eat them, and another quarter didn't have any chips?

CIO Actually, Ben, we've been trying to address your concerns on two levels. One, we've established a project management office to balance our project portfolio. We're starting to use some basic risk analysis. And two, we've adopted some agile development techniques to improve code quality and production efficiency.

CFO That's a great start. But it's only the beginning. We need even more discipline and empirical analysis. Because all it takes is one troubled project to screw things up royally. When I got the update on your wireless project, tell you the truth, I started thinking about Nike's inventory mess. And that hospital in Boston that had its network go down for four days. I read about that in that magazine you're always dropping on my desk. What's it called? *CIO*? Story by some guy named Berinato? When these things go bad, you start talking about the vagaries of software. Me, I've got to account for it. Literally.

CIO OK, Ben. I hear you.

CFO COURTANES: "Servers, switches, that stuff doesn't rust or sink, and it seems like you want to upgrade it every half-hour or so."

On Continuous Upgrades

CIO Harold R. Peeples Let me ask you, Ben—and I hope I'm not sounding snippy—but can a CFO really appreciate something when its value can't be expressed in dollars and cents?

CFO Ben Courtanes Sure we can. For example, intellectual property. Biotech companies spend years and billions of dollars before they even have a product. How do you measure the value of that R&D? It's pretty much priceless. And morale. I don't know how to measure its value, but I know we have to invest in it.

CIO Let me ask you this then: Is it possible that there's value in the continuous upgrade of our IT? Can you see the value in making sure our technology is as good as our competitors'?

CFO No, I can't. And I'll tell you why. Low morale leads to lower productivity. Running low on our store of intellectual property can jeopardize future revenue. How much? Not sure. But I'm sure it'll happen. On the other hand, I can't see any cost from extending the lifecycle of our IT systems. If anything, it probably increases ROI by reducing capital expenditures without really hurting operations.

CIO You're wrong, Ben. There are returns from continuously upgrading IT systems—some we can measure, some we can't, both real. Let me tell you about the Coast Guard.

CFO Go on.

CIO The Coast Guard exemplifies what happens when you try to extend technology lifecycles. Many of its boats are 30, 40, even 60

years old. In the late '90s, it finally was forced to start an upgrade process called project Deepwater. Replacing boats and aircraft, it turned out, would cost $20 billion and take 30 years.

CFO I'm impressed. In a horrified way.

CIO Obviously, they didn't have $20 billion.

CFO Pity.

CIO At least they couldn't get it all at once. So while they've started to upgrade some boats, they need to maintain a lot of others until there's money available to replace them. Now, you'll love this part. I'm going to use numbers.

CFO Go for it.

CIO A 30-year-old, 41-foot Coast Guard patrol boat costs $2,162 per hour of operation. The new boat the Coast Guard wants would cost about $600 per hour. They could save on the order of 75 percent, $1,500 per hour of operation, if they had newer boats.

CFO So if one boat works a 40-hour week, that's about $3 million a year savings per boat.

CIO Pretty quick, Ben. Not to mention a new boat could handle new missions, like homeland security, that the old boats weren't designed for. Just like the wireless project: leapfrog technology and save money at the same time.

CFO I hope they don't have to tear down walls and patch security holes too.

CIO I'll ignore that. Point being, the money the Coast Guard saved by spending almost nothing on capital investment over the years is being lost to maintenance on old boats it can't afford to replace.

CFO You're saying that if you commit more capital year-over-year to maintain a smooth level of investment, you get a portfolio of better equipment that's less expensive to maintain. And you end up spending less than what you would ostensibly save by avoiding investment. I get that. But boats fall apart, Harold. And we're talking about stuff that's 10, 30, 40 years old. Servers, switches, that stuff doesn't rust or sink, and it seems like you guys want to upgrade it every half-hour or so.

CIO In one sense, you're right. IT equipment doesn't deteriorate the way boats do. But IT systems are social; they live in a community of systems that interact.

CFO I don't normally think of them like that, Harold, but I won't argue. What's your point?

CIO This: If those other systems in the community improve and get upgraded—and ours don't—our systems become less capable of interacting with them. And if those other systems in the community are getting upgraded every half-hour or so, like you said, then, yes, we have to keep up.

CFO Why?

CIO Because IT systems deteriorate socially. So the company trying to save money by extending lifecycles to the max ends up having difficulty with business transactions because the systems don't interact well with the newer, better, different systems all around them. Maybe the older systems don't support the right document format. Or maybe that old network gets a reputation for being less secure. Customers and investors lose confidence. The stock starts to sink like a, like a leaky Coast Guard boat.

CFO OK, Harold, I get it. But why aren't those document formats standard? Why aren't there regulations demanding people-secure systems to a certain baseline? In every other part of the business we've decided there's no competitive advantage to being on the kind of hamster wheel IT keeps us on. Nicholas Carr in that book, *Does IT Matter?* says the competitive advantage of IT innovation is gone; it's a myth. If he's right—and I think he is—we should stop chasing something that isn't really there.

CIO You know I disagree with Carr, Ben. Maybe CIOs haven't done a good enough job demonstrating IT's competitive value, but if you want to test Carr's hypothesis, it's easy enough.

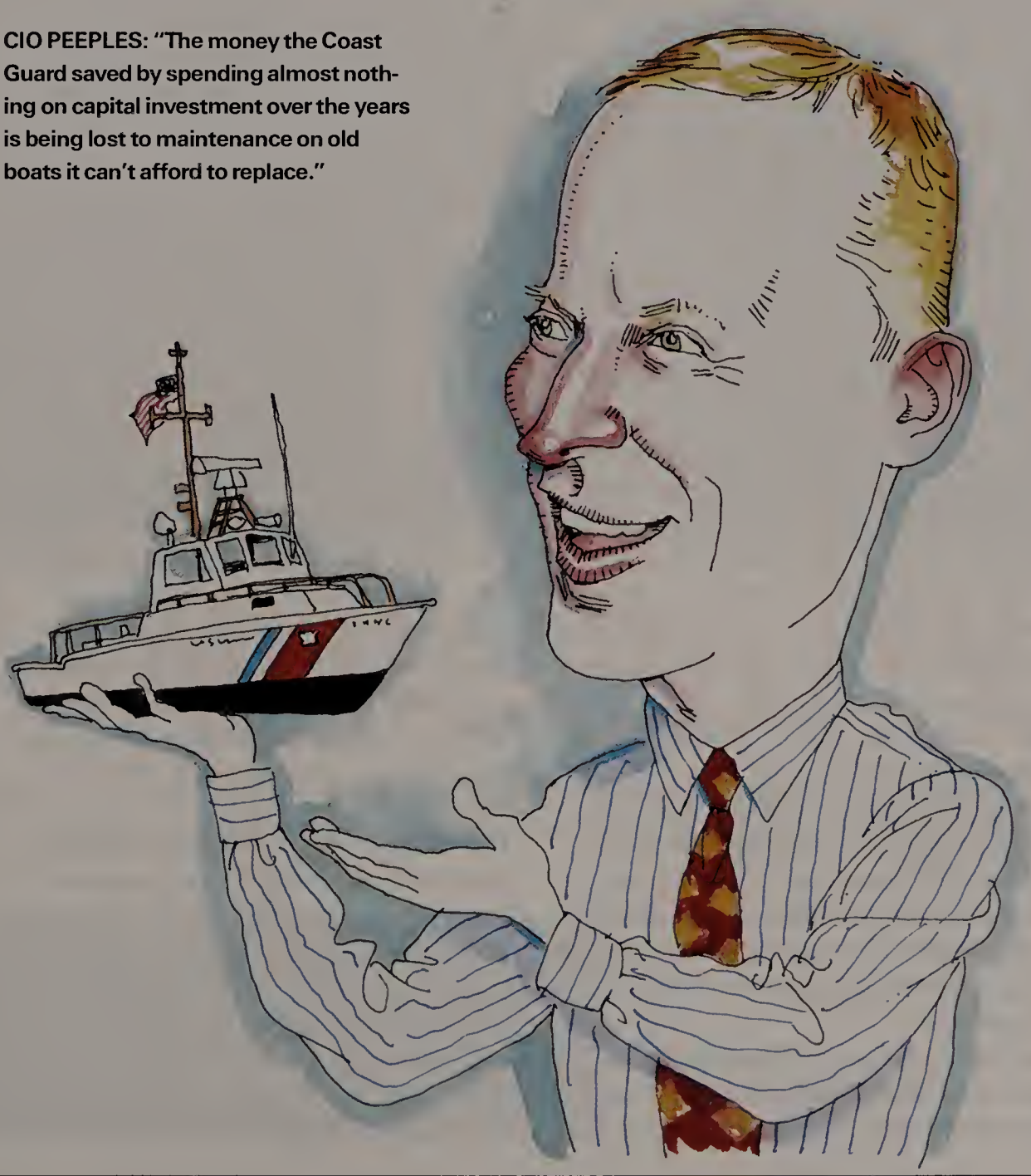
CFO How?

CIO If IT is just a commodity, then we can buy it like we buy paper clips. Lowest cost. And when our competitors start to beat us with new systems that our own systems can't even interact with, and we lose market share, and the stock falls, you can tell the board how much we saved by not upgrading.

CFO That's a little overstated, don't you think?

CIO Maybe a little, but the point is, you don't

CIO PEEPLES: "The money the Coast Guard saved by spending almost nothing on capital investment over the years is being lost to maintenance on old boats it can't afford to replace."



want to risk it, do you? You know the value of making sure our IT is competitive even if you can't express it as a number. So, Ben? Want to try buying lowest cost IT?

CFO Maybe not right now.

On IT Security

CIO Harold R. Peeples Remember the CRM system we implemented, Ben?

CFO Ben Courtanes How could I forget? The personal data of 2,000 customers was posted on the Internet.

CIO Exactly. And I took the hit for it. But I still don't think I deserved it.

CFO Didn't deserve it, Harold? How was a huge hole in our CRM not your fault?

CIO The hole was there because I was told to go live by the beginning of the holiday season. Well, suppose I had come to you in August and said, sorry, Ben, but we have to do some more security work. That's going to add four months and $4 million to the schedule. And even then I can't guarantee it'll be completely secure.

CFO What would I say? I'd say, why wasn't this in the original plan? I'd say, here we go again! Just like the steel in the buildings.

CIO Then I'd say, it wasn't in the plan because our CEO had already made up his mind what the deadline had to be. You know what happened, Ben. He had lunch with a consultant who had just helped Rival Inc. do a huge CRM implementation, so he decided we had to have that system and we had to have it yesterday.

CFO Look on the bright side, Harold. At least he doesn't think IT's a commodity.

CIO No, he thinks it's a light switch. All we have to do is turn it on. And if I suggest that getting a CRM system up and running might be a little more difficult than the consultants and the white papers make it sound, I'm the bad guy. I'm preventing us from staying competitive.

CFO But this is security. This is our brand, our reputation. You have to be the leader. You have to be the guy who tells us that the project's not ready, even if it means we miss the holiday season. Saying someone made you do it just doesn't cut it, Harold. Where does this buck stop?

CIO You can only rain on a parade so many times before your bosses get tired of having you around, Ben.

CFO So your job security comes before the good of the company? You can't believe that.

CIO No, of course not. But I could name a half-dozen CIOs who did lie down on the tracks. And you know what? They're looking for work right now. It's hard to tell everybody we need extra time, and it's hard to tell you we need extra money. This isn't just my problem, Ben; this is the state of IT security. It's not too good. So I end up looking ineffective, even if putting the brakes on a project is the smartest thing I could do.

CFO What you just described to me is an unquantified risk profile. Put some numbers behind it and I'll buy everything you're saying.

CIO It's not that easy, Ben. We're talking about massively complex programs operating in massively complex computing environments. I'm not convinced risk analysis applies.

CFO See, this is my biggest problem with IT. It's all black magic. When the going gets tough, IT says it's too special to have the rules of business apply. IT is not special. Nothing could be more appropriate to risk management than software security. Even if the curve shows huge, unacceptable risks in getting a project done before the holidays, that's information I could have used. It's information I would have loved to have had before 2,000 credit card numbers were exposed.

CIO Come on, you don't really believe a few charts and graphs would have stopped us from trying to finish the project by the holidays? The big guy would have said, get it running and secure it as we go.

CFO Maybe. Maybe probably. But at least we'd know the relationship between the dollars we spend on security and what we might get from them. That's what risk analysis does. That way we work out cost-benefit and decide—based on the data—how much time and how much money is absolutely necessary to spend.

CIO What I'm hearing, Ben, is that you're asking me to become a junior CFO for IT. If I'm hiring a bunch of risk managers, spending all my time and budget trying to get these numbers to justify my existence, how am I supposed to focus on the projects that'll help LargeCo make money? No offense, but I don't want your job.

CFO None taken. I'm not asking you to become a CFO, and I'm not trying to take away your decision-making authority. Risk management isn't designed to make decisions for you, Harold; it's designed to inform the decisions that we're counting on you to make.

CIO Are you willing to approve extra funds to allow me to hire some risk analysts?

CFO If that's the only way to do it, absolutely.

> CFO: Look on the bright side. At least the CEO doesn't think IT's a commodity.
> CIO: No, he thinks it's a light switch. All we have to do is turn it on.

Conclusion

CFO Ben Courtanes I think we made some progress today, Harold.

CIO Harold R. Peeples I think so too, Ben. We're not going to agree on everything, but we've certainly found some common ground to build on.

CFO Yes. As cost centers go, IT's not so bad. You should see what marketing wants from me.

CIO A cost center, Ben? I thought we were beyond that.

CFO Well, Harold, no offense, but IT's not exactly producing revenue, is it? In fact, this is as good a time as any to tell you we're planning to cut your budget by 27 percent.

CIO What?

CFO Just kidding, Harold. I'll approve a budget line item for risk analysis inside IT, and you can teach me about buffer overflow.

CIO Buffer overflow is so cool, Ben. You're going to love it. CIO

You can dialogue Senior Editor Scott Berinato at *sberinato@cio.com*.

UTILITY=AVAILABILITY.

From SAP to BEA to Oracle, market leading VERITAS clustering and replication software eliminates both planned and unplanned downtime. Continuous availability. What a relief. Software for Utility Computing at veritas.com

VERITAS™

© 2004 VERITAS Software Corporation. All rights reserved. VERITAS and the VERITAS Logo are trademarks or registered trademarks of VERITAS Software Corporation or its affiliates in the U.S. and other countries. Other names may be trademarks of their respective owners.

Reader ROI

- How investors' views can help CIOs be more effective
- What CIOs should tell investors and analysts about IT operations
- How to prepare for a Wall Street conference call

Talking to Wall Street

CIOs have a vested interest in getting to know the money people who cover their companies. Verizon CIO Shaygan Kheradpir has learned that knowing what to say to financial analysts can help boost a company's fortunes—and a CIO's career.

BY MERIDITH LEVINSON

Shaygan Kheradpir doesn't know when his next big meeting with the "money people" (his collective noun for venture capitalists, research analysts and investors) will be. It could be a dinner two nights from now, or an industry conference next month. For the time being, he's relieved to have a break. In March 2004, the 43-year-old CIO of Verizon Communications completed a breathless tour of the financial and consumer electronics worlds that began in December 2003 at Credit Suisse First Boston's (CSFB) Media and Telecom Week conference in New York with the unveiling of a new service that synchronizes the address books and coordinates calls on customers' PCs, mobile phones, pagers and handheld devices. A month after the conference, he was in Las Vegas for the Consumer Electronics Show. There, he made sure that his boss's live demonstration of the service called Iobi (pronounced *eye-oh-bee*) worked flawlessly (it did) before attending a conference call with investment analysts to answer questions about Iobi, as well as the new Verizon One phone and a new high-speed wireless service. That event, positioned by Verizon as part of a $3 billion capital investment in broadband networking for the masses, was followed by a blitz of informal calls from analysts and investors who wanted more information from Kheradpir on these new products.

Kheradpir's spree ended at a Manhattan restaurant with a roundtable discussion hosted

PHOTO BY WALTER SMITH

Verizon CIO Shaygan Kheradpir peppers his presentations with numbers that show how IT helps his company's bottom line.

by an investment bank, where he talked more about the Iobi service and the telecom industry.

The purpose of these conferences and conversations was as much to trumpet Verizon's products as it was a chance for Kheradpir to heighten his company's profile and show himself to be an industry thought leader. It was the culmination of an 18-month-long campaign by the CIO to convey the significance of his company's investments in IT and networking capability to both cut costs and attract new business.

His long hours on tour, it seems, were worthwhile. On Dec. 12, the day after Kheradpir gave his presentation at the CSFB event, Verizon's stock closed nine cents higher (at $33.43 per share) than it did the day before. The day of the investor conference call that accompanied his boss's live demo of Iobi at the Consumer Electronics Show in Vegas, Verizon's stock closed at a high of $37.12, up 56 cents from the day before and up $3.69 since his presentation at CSFB on Dec. 11.

Kheradpir says his encounters with the investment community's power brokers are part of being a Fortune 10 CIO. And he thrives on them. The questions that analysts and investors ask him about Verizon's cost structure, its customer-retention strategies and growth plans help him focus on IT initiatives that will achieve the quarter-over-quarter increases in earnings per share (EPS) that Wall Street seeks—and that differentiate winning businesses from the also-rans.

"It's very important for CIOs to get a deep understanding of what the investor is looking for," says Kheradpir, who retains a slight accent from his native Iran. "This group that has influence on your company's future is another stakeholder that you need to be very close to. I get their reaction to what we say, and that really helps me in fine-tuning the IT strategies here."

A Vested Interest in Investors' Views

Having spoken with investors on a regular basis since he became Verizon's CIO in 2002, Kheradpir is at ease addressing this audience. He's learned to focus on topics that interest analysts (such as costs and customer-retention strategies) and he knows to whet their appetites by focusing on the financial impact that long-term IT initiatives will have on the company. And most important, he understands how crucial Wall Street is to his $67.8 billion company's fortunes, and how critical it is for him to be plugged in to their interests. Kheradpir says of investors, "'OK, we're investing in you Shaygan, partially too, so what are you going to give us for a return?' So I really feel that it's my job to be able to invest in IT projects that deliver one quarter at a time."

Reaching out to analysts and investors is important because doing it well is a way to inspire their confidence, says Hans C. Brechbuhl, an adjunct associate professor of business administration at Dartmouth College's Tuck School of Management. "Markets are all about confidence or lack of same," he says. If a CIO can articulate his company's strategy and relate it to business results (for example, a consumer goods maker using IT to meet supplier specifications at Wal-Mart), Wall Streeters will feel more comfortable recommending the stock. Building confidence, says Brechbuhl, "leads to a much better evaluation by the analysts, and that inevitably has an effect on the stock price."

So the stakes are high, Brechbuhl says. If an executive fails to tell financial analysts what they're interested in, he risks shaking the market's perception of his company's investment value.

And so Kheradpir accepts every opportunity his kinetic calendar permits to meet with them.

News Analysts Can Use

What Verizon's CIO told analysts at CSFB's Media and Telecom Week

- In 2000, Verizon spent 6.4 percent of its revenue on IT. Now it spends about 4.2 percent of its revenue on IT.
- Verizon used to have five control and data centers. Now it maintains just two.
- Verizon has reduced its number of systems by 25 percent.
- In 2001, few transactions were done on Verizon.com, compared to roughly 30 percent now. Verizon expects that rate to hit 40 percent within 18 months.

To Every Meeting, A Purpose

Kheradpir has learned how to rub elbows with the money people. When he attends a conference or a dinner, he doesn't end a meaningful conversation without giving out his contact information. He tells analysts and investors that they can call him for his opinions on the telecom industry. And once he gets a call from them, he then feels free to pick their brains too.

Regular contacts are important, says Kheradpir, because their interests change each quarter, driven by a variety of factors such as world events, government regulations and new business risks. For example, at the CSFB conference last December, the analysts were interested in the impact of voice over IP on Verizon's core business because they had begun to see more and more companies making announcements about the technology. The quarter before, all they wanted to hear about was his company's operating costs. The quarter before that, customer retention was the priority. Kheradpir anticipates their interests: He reads investment houses' reports covering company outlooks, valuations and the hot topics du jour. By staying abreast, Kheradpir doesn't risk alienating his audience by talking about his ERP upgrade when they want to focus on how Verizon will keep customers from switching phone companies.

And a CIO doesn't have to wait for a meeting or phone call. Kheradpir says that once you've established relationships with the analysts who cover your company, you can pursue them for feedback on IT-based products and services you're developing, and for insights into your industry. "The more you engage, the more focused your message [to them] becomes. And the more it helps you to focus on your work inside the company," says Kheradpir.

These exchanges are promotions for both his IT work and market research. Just this past March, Kheradpir invited a prominent investment banker to his midtown Manhattan office to present the latest version of Iobi. There, the CIO sought the banker's opinion on how to market the service, his views on integrating Iobi with other electronic devices, and whom (and whom not) to partner with on licensing agreements. Kheradpir says he got very direct feedback from this Wall Street insider. He doesn't always heed such feedback, but acknowledges that it's "another

input in your decision-making process from the investor who owns the company."

Eyes on the Bottom Line

Although investors' passions change, some topics are evergreen, Kheradpir says. Some of these are how IT can lower cost structure, how IT can support customer-retention strategies, and how IT-enabled business changes could alter analysts' models for projecting EPS.

This focus on earnings is critical, and getting the EPS model right is vital for research analysts because it's "what investors base their investment decisions on," says Wayne K. Homren, a research analyst with Parker/Hunter. (Parker/Hunter does not currently own shares in Verizon.)

Homren says that basic EPS models take into account financial fundamentals such as a company's revenue, cost of revenue (what it costs in labor and materials to produce goods and services that bring in money), net profit (profits before taxes and dividends are paid out), depreciation expense (accounting for the use of assets over time) and interest expense. (For more on accounting terms, see "What CIOs Need to Know About Money," Page 22.) If analysts fail to take into account the impact a new product or service will have on revenue while making their projections, they risk completely underestimating how a stock will perform. And underestimating (or overestimating) how a stock will perform is not good for investors or the company: It could lead investors to avoid a stock that will earn a lot of money, or (in the case of overestimating) it could lead investors to purchase a stock that earns less than expected, or even loses money.

While analysts are always interested in business changes that will affect their models, they're also often skeptical of them. So Kheradpir advises CIOs to be persistent and repeatedly explain why and how a new product or service will cause revenue to spike.

Simple Sentences Convey IT Alignment

Kheradpir says presentations should follow the simple, declarative structure of a Dick and Jane primer. His presentation at the CSFB conference began just that way: "I'm here to talk to you about our IT efforts for productivity and revenue. From 2000 to 2003, IT costs have come down radically in Verizon. In 2000, 6.4 percent of revenue was spent on IT. Now we're spending about 4.2 percent of revenue on IT. Three things have helped bring down the costs. First and foremost is the natural merger synergies: We've gone from five control centers and data centers to two. We've reduced the number of systems by 25 percent...."

> "If the analysts don't make a direct linkage between what you're saying and this quarter's earnings per share, they switch off."
>
> —VERIZON CIO SHAYGAN KHERADPIR

Says Kheradpir, "If they [the analysts] don't make a direct linkage between what you're saying and this quarter's earnings per share [or a few quarters down the line's earnings per share], they switch off." So, if you begin talking about a project that's not going to be completed for two years, don't expect anyone to call you in two years to find out how the project went.

John C. Hodulik, a managing director and telecom analyst with UBS, says Kheradpir is a good communicator who has learned to keep his IT-related remarks focused on the bottom line. (Neither Hodulik nor UBS owns Verizon shares.) Hodulik says, "He puts [technology] in terms that nontechnology people can understand."

Persistence Pays Off

When Kheradpir and some of his colleagues first conceived of Iobi (formerly known as digital companion) in 2000, he thought it would differentiate Verizon from the competition and dramatically increase his company's revenue by attracting new customers. For that reason, he wanted to get Iobi on the money people's radar screens. But he knew they wouldn't immediately be interested in it for two reasons: the long time it would take to develop and roll out the service, and because of its highly technical nature. To pique their interest in Iobi, Kheradpir started mentioning plans for the offering in mid-2002, 18 months before its launch at the CSFB conference. Briefly and succinctly, he brought up Iobi each time he spoke with analysts. During discussions of Verizon's operating costs or customer-retention strategies, Kheradpir made sure to drop a line about Iobi's functionality, where it stood in the development pipeline or its impact on the telecommunications industry—just to keep the concept in analysts' minds.

But then it was clear that his strategy worked. After a year and a half of teasing the topic, Iobi was all the money people wanted to hear about during an investor call in January. Analysts wanted to know when it would be released, and what Verizon's marketing strategy would be to lure customers. And, oh, by the way, was there a demo or pilot they could see?

Let a Demo Do the Talking

At the CSFB conference, representatives from more than 60 companies—among them giants from entertainment, media and telecom industries—gathered at New York's Plaza Hotel.

There, Kheradpir let a product demonstration do the talking. He used his cell phone, BlackBerry and a laptop to show the hundreds of journalists and analysts how, with one button click, he can add the phone number of any person who calls him (or whom he calls) into any of his devices, and synchronize his phone books across all of those electronics. And how, by clicking on a bookmark on his phone or PC, he can place a call to his CEO Ivan Seidenberg via his phone or laptop. Using his own gadgets, Kheradpir was also able to drive home the message that Verizon was leveraging its assets—its SuperPages telephone directory, voice and data networks, and its IT infrastructure—to create a service that would attract new customers, retain existing ones and differentiate the company from rivals. Verizon's CIO lent a narrative to the

proceedings, but the demo itself was more effective than any verbal explanation.

Doreen Toben, Verizon's CFO who also presented at the CSFB event, says having Kheradpir showcase the product gave their presentation punch. "It was very helpful for me to have him there to show [the analysts] the product and give more examples of how it worked. It was very impactful," she says.

A Clear View of Wall Street

Communicating with Wall Street analysts keeps Kheradpir focused on what's vital at Verizon—a company that went through recession rounds of cost-cutting, layoffs and weak earnings, and is trying to position itself for future growth while paying down its $45.4 billion debt.

Since 2002, Kheradpir has implemented IT projects that have been heralded by the company and hailed by Wall Street for reducing costs. He put applications on Verizon.com that allow customers to view and pay their bills online, and change, cancel or order new services. The online customer self-service capabilities have reduced the number of inquiries that hit Verizon's call center by 29 percent. An automated voice-recognition handles 18 percent of calls that in the past went to a call center. Kheradpir peppers his presentations to analysts with such details.

Wall Street has reacted positively to Verizon's efforts: Last March, A.G. Edwards upped Verizon's stock from a hold to a buy, and Morgan Stanley analysts said they expect the total return of Verizon stock to exceed the average total return of other telecom companies they cover. Morgan Stanley attributed its positive rating to Verizon's cost-cutting efforts, "best-in-class network," and one of the company's new broadband wireless services—all of which Kheradpir discussed on his tour of analysts' events.

Had Wall Street not seen improvements enabled by IT, says Kheradpir, he wouldn't be getting many invitations to conferences or exclusive dinners. "They come back, over and over again and they ask more and more [questions] and [their level of] engagement gets deeper because of IT's influence in enabling our business," says Kheradpir. But really, they keep coming back because this CIO makes it worth their time.

E-mail feedback to Senior Writer Meridith Levinson at *mlevinson@cio.com*.

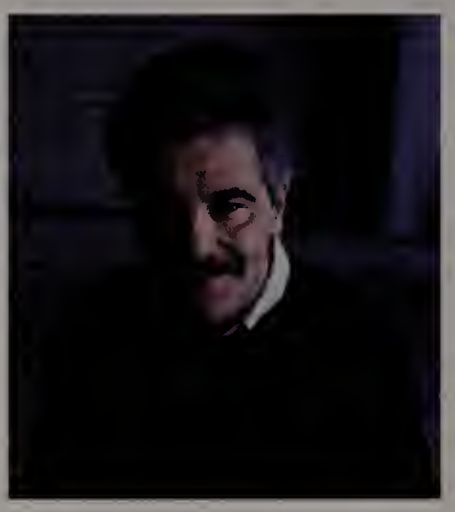
Joe Eckroth's 10 Minutes of Truth

Mattel's CIO prepared for months to explain to Wall Street how IT was a catalyst for change

BY MERIDITH LEVINSON

Adrenaline surged through Mattel CIO Joe Eckroth as he sat on the edge of his chair at a table in his boss's conference room. It was 5:30 in the morning, April 18, 2002. For the first time in Eckroth's 18-year career, he had to answer to Wall Street. ■ Don't screw up, Eckroth told himself.

It was Mattel's first-quarter 2002 earnings conference call, the first he ever participated in. He was about to address a group of people whom he knew had a profound impact on Mattel, which had been through the ringer with Wall Street just a few years earlier when Mattel was bleeding red ink with losses totaling $182.7 million in 1997, $82.4 million in 1999 and $431 million in 2000.



Stress IT's impact on the bottom line when talking to financial analysts, says Mattel CIO Joe Eckroth.

Several months before the conference call, Eckroth received an e-mail from Dianne Douglas, Mattel's vice president of investor relations. Douglas asked him to tell Wall Street analysts about Mattel's IT strategy and its correlation with the corporate strategy. His first thought was: What am I gonna tell these people? How am I gonna lay this out for them so that they understand? It's not the clearest subject for this audience to grasp. But then, Eckroth's fleeting freak-out turned into enthusiasm. This is pretty cool, he thought. This is an opportunity to be on the front line and tell Wall Street how IT propels the company.

Mattel had been investing sizeable chunks of money in IT as part of its corporate strategy since Bob Eckert replaced Jill Barad as CEO of the $5 billion company in May 2000 and hired Eckroth a few months later. Barad had all but run the company into the ground during her tenure. From late 1998 to 2000, the value of Mattel's stock dropped more than 65 percent. Barad's missteps are well chronicled: her $3.8 billion purchase of the Learning Co. in May 1999, her reluctance to scale back Mattel's production and inventory after Toys 'R Us announced plans to slash its inventory in 1998, her overpromising and under-delivering on Mattel's earnings projections to Wall Street.

With this backdrop, Eckroth has done a lot to help revive the company since he became CIO in July 2000. He gave software to product developers who previously used clay to design prototypes, which cut development time by 20 percent. He automated the process for approving licensing agreements, which now takes five weeks instead of three months. And he installed a new transportation management system that optimizes product shipments. According to Eckroth, Mattel saved time and

PHOTO BY MARK ROBERT HALPER

an undisclosed amount of money due to the reduced number of less-than-full truck shipments and the optimized shipping network.

Eckert and Douglas decided in January 2002 that it was time to showcase their CIO on a conference call and have him explain to analysts exactly how the company was spending its IT budget (between $45 million to $50 million a year) and the cost savings and performance gains the company was achieving as a result.

Practice, Practice, Practice

Eckroth worked intensely with Douglas and with Lisa Marie Bongiovanni, his handler in Mattel's communications department, on his presentation for the conference call. They told Eckroth he needed a hook for his presentation that would grab analysts' attention, and give them a good reason to write positive things about Mattel's corporate and IT strategies in their advisory reports to investors. Hook Wall Street analysts by discussing concepts familiar to them, such as supply chain, consolidation and automation. These concepts can easily translate into cost savings and profit-margin improvements, they said.

Eckroth's coaches cautioned him against getting too technical and underscored the importance of clarity. Whatever analysts don't understand, says Eckroth, they ignore. "Their reports are due out to investors within hours [of the conference call]," he says. "My job is to make sure Wall Street really understands that there are real things happening that are causing improvements, and that they ought to continue to bet on us. This is no small deal to those of us who own Mattel stock."

Eckroth's original presentation draft, which he says took a couple of hours to write, went through multiple revisions. He and Douglas realized that trying to cover his entire IT strategy (which they originally set out to do) would take too long and would be too difficult for listeners to comprehend. They refocused on the elements that would resonate most with analysts: supply chain, shared-services optimization and automation. He threw out details on specific technologies he was using, a data-center upgrade and his e-business initiatives. He pared down the copious examples of efficiency improvements he had included in his original draft to those that had the highest impact on Mattel's bottom line. He exorcised technical jargon such as "throughput."

"Even though you're doing this on the phone and you've got it scripted, you need to make it sound like you're not reading. You've gotta make it sound natural," he says.

So with the guidance and rehearsal critiques of Douglas, Bongiovanni and Eckert, Eckroth practiced. And practiced and practiced. He didn't stand in front of a mirror or videotape his talk to play back and dissect. He just paid close attention to his delivery and made sure he sounded energized rather than monotonous. Eckroth says it wasn't hard for him to inject passion into his voice because Mattel's strategy is very personal to him. He owns it. "I'm very excited to tell anyone about what we're doing and the impact we're having," he says.

Eckroth rehearsed with Douglas, Bongiovanni and Eckert three times, and then another dozen times on his own. By the time the day arrived, Eckroth had his presentation memorized.

The Day Arrives

On April 18, 2002, Eckroth woke up at 4:30 a.m. and was in his CEO's conference room by the 5:30 conference call time. When he first woke up, he wasn't nervous, but by the time he reached the office, he started feeling a "healthy nervousness, the kind that keeps you on your toes."

He sat at a round table in Eckert's conference room with Douglas, Eckert and Kevin Farr, Mattel's CFO. Douglas kicked off the call by introducing the Mattel execs on the line and offering the safe-harbor statement (warning investors that certain factors beyond Mattel's control could prevent the company from achieving the results it projects). CEO Eckert took over from there, offered a few highlights of the company's performance in 2001, and described in broad strokes the company's ongoing transition before passing the baton to Farr.

When it came time for Eckroth's presentation, the CIO was as ready as he'd ever be. He had the text of his presentation in front of him as a crutch. He spoke of the overarching goal of his company's multimillion-dollar investments in IT: to help the company better manage its business and to drive better economic performance through increased sales, a higher operating margin and improved asset turns. He discussed the four key areas of Mattel's IT strategy: upgrading the company's global IT infrastructure, replacing and integrating the company's fragmented enterprise systems, building an enterprise data warehouse and automation. "The most nerve-racking part about the call was making sure I didn't skip something, making sure I came across as very passionate and confident about what we were doing, and how this was a game changer for the company," he says.

Less than 10 minutes later, he finished—and without screwing up. In fact, the conference call was a resounding success, judging by the reports that came out of the investment houses within 24 hours of the call with ratings from U.S. Bancorp Piper Jaffray ("strong buy"), Salomon Smith Barney ("buy") and Lehman Brothers ("buy"). All noted Eckroth's presentation and the company's IT strategy. "The company's long-term IT strategy should enable the company to continue its cost-cutting initiatives going forward," the Lehman Brothers report said, adding, "Not only will the strategy help provide better margins, but it will also benefit asset turnover through better inventory management and customer service."

The upbeat outlook carried forward for Mattel's results. In 2002, the company posted a $230 million profit. And last year, Mattel's net income hit $537.6 million. CIO

Talking Points

Five tips for building your confidence addressing the Wall Street crowd

1. Ask your CFO or investor relations department to allow you to participate in analyst briefings.
2. Get to know members of the investor and analyst community by attending conferences hosted by investment banks.
3. Position yourself as a resource for analysts.
4. Read reports by investment analysts to stay abreast of Wall Street's interests, especially in your industry.
5. When speaking with members of this community, focus on IT projects that will have an impact on the bottom line. Be clear and concise. *–M.L.*

20 Thoughts About Money

Including a few facts, several famous quotations, a couple of anecdotes and one conclusion

BY DAVID ROSENBAUM

1. Who wants to know?

Everyone. But who wants to talk about it? No one. Even in a business magazine, such as this one, money is seldom mentioned. Value is mentioned. Profits are mentioned. Savings. Even compensation. Rarely money.

Which is no surprise. Ask someone about his sex life and you might get an answer. Ask someone about his salary and, dollars to doughnuts, you'll get an icy stare.

2. On its double nature

"Money is a singular thing. It ranks with love as man's greatest source of joy. And with death as his greatest source of anxiety."
–John Kenneth Galbraith, American economist

3. What Freud says

Money is private. Money is dirty. In his 1908 essay "Character and Anal Eroticism," Sigmund Freud argued that happiness comes from the fulfillment of infantile wishes: love, security and so on. Money, according to Freud, does not bring happiness because "money is not an infantile wish."

We don't want to get into what Freud says the connection between potty training and money is, but suffice it to say that there are strong psychological roots to phrases such as "filthy lucre" and "stinking rich."

4. Not for kids

Whether because our parents thought it was dirty or none of our business, we were not brought up to be sophisticated about money. In "A Penny Saved," a 1995 survey of 34,000 Americans, 77 percent said they didn't know as a kid how much their father earned; 70 percent didn't know how much their parents' rent or mortgage was; 77 percent didn't know how much insurance their family had.

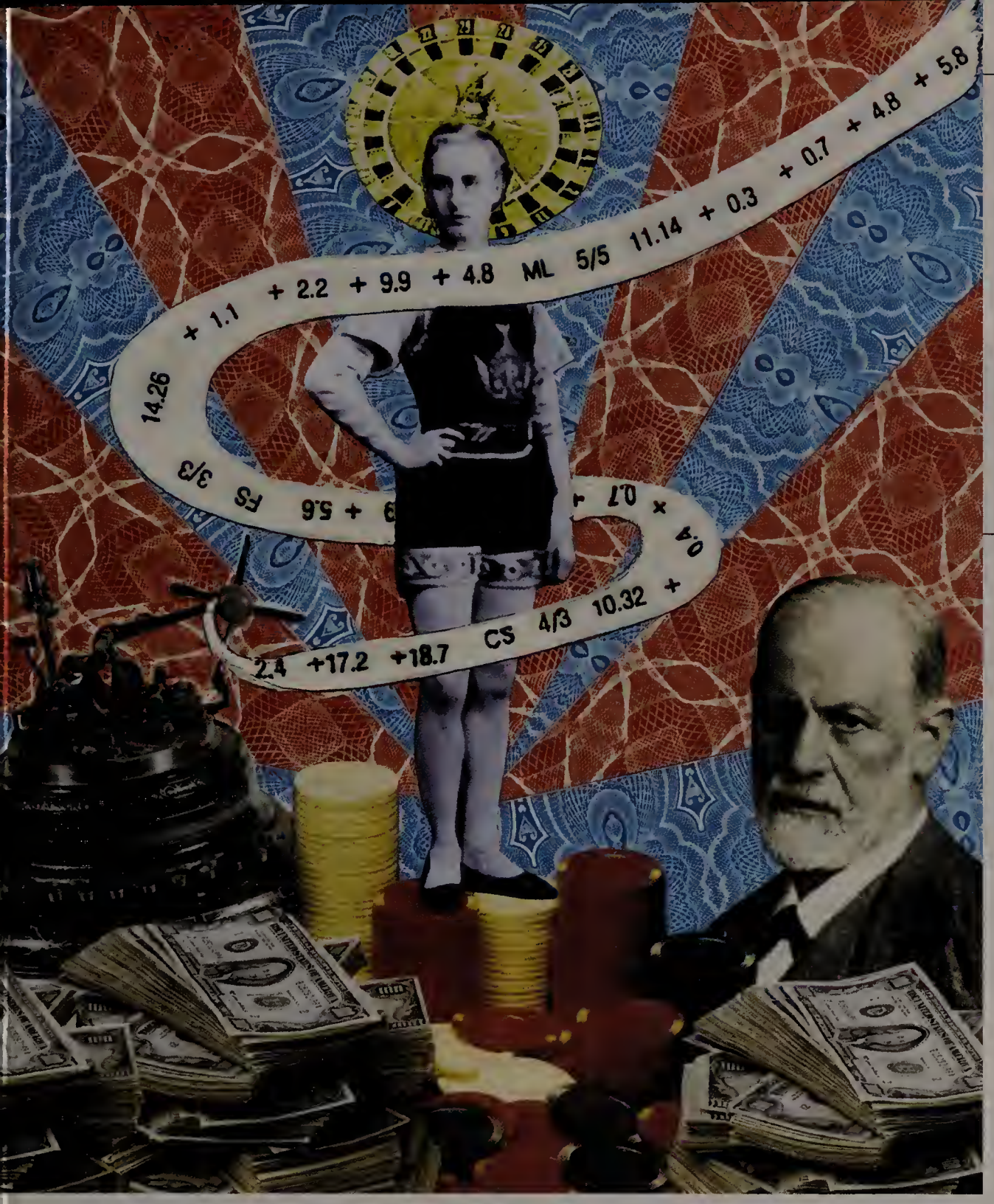
5. What CIOs don't know

So we come by our ignorance of money honestly. And for many of us, that ignorance is not relieved by adulthood. The CIO of a large university recently told me that—in his view—his peers were poorly informed about money, and uncertain about how it was managed and accounted for in a business. And the reason for that, he said, was because "most of us have come up through the IT ranks."

Underlying this excuse is the assumption that money is a secret code known primarily to CFOs and accountants.

Secrets confer power. So naturally, this university CIO (not atypically) wanted to learn the code.

ILLUSTRATION BY STEVEN DANA



6. The thirst for knowledge

"Teach me about gold, Mr. Nazerman."
–*The Pawnbroker* (1965)

7. In the CIO's self-interest

It makes sense for CIOs to attempt to crack the financial code. Kelvin Thompson, senior partner and head of innovation for executive recruiter Heidrick & Struggles, points out that those CIOs whose compensation is directly linked to the overall performance of the business, not just to IT, are better paid. These days, says Thompson, "CIOs are expected to be as much a part of the business process as they are of the bits and bytes, and you can't do that if you can't read a balance sheet."

Thompson's advice to CIOs without financial skills is simple: "Go and learn it fast." The alternative, he says, is to stop thinking of yourself as a true C-level executive.

8. The monster within the labyrinth

Unfortunately, there are limits to what a CIO, or anyone, can learn about the money that flows in and out of—or remains locked up in—any enterprise. We think we can, because money is counted in numbers and numbers are objective and unemotional. The sums they add up to are either right or wrong, right?

Well, if the accounting scandals of the past few years tell us anything, it's that the answer to this question is maybe not. As John Allen Paulos writes in *A Mathematician Plays the Stock Market*, "Every day accountants must make judgments and determinations that are debatable—about the way to value inventory, the burdens of pensions and health care, the quantification of good will, the cost of warranties, or the classification of expenses."

Money, in the hands of an accountant, is more like clay than granite. What Paulos concludes is that more important than the rules and models that guide the accounting is the transparency with which the numbers are generated and recorded.

Of course, if you can't read a balance sheet, nothing will ever be transparent enough.

9. The scandals

And speaking of scandals...

Why would Dennis Kozlowski at Tyco, the Rigases at Adelphia, Scott Sullivan at WorldCom, Andrew Fastow and Jeffrey Skilling at Enron, or even Martha Stewart—people by any reckoning wealthy beyond dreams of avarice—risk their reputations and freedom to add more to their already huge piles?

Or why would New England Patriots cornerback Ty Law call his team's offer of a four-year, $26 million contract after this year's Super Bowl victory "an insult"?

Clearly, these individuals were not thinking about money the way most of us do—as something we carry around in our wallets or keep in the bank in order to pay for food, shelter, security or what we imagine to be happiness. They were thinking about money in its role as a marker of success or potency or influence. They are gambling with chips at the big poker table of life.

10. Money as markers

Poker is about winning chips. And chips are quite different than money. The magic of chips is that they transform money, stripping away its emotional content, relieving us of our anxieties about handling it and managing it. Individuals who would flinch at risking a portrait of Ben Franklin on the turn of a card will lightheartedly place a $100 chip on red and call it fun when the little roulette ball stops on black.

Chips were first used in European casinos such as Monte Carlo and Wiesbaden in the 18th century. Without them, there would be no Las Vegas.

11. What I did for money

There are chips in business too.

In 2000, I left a secure, well-paying job to go to an Internet startup. I left not because I was unhappy, or because I was being offered significantly more money, or even because the job intrigued me. I left because they offered me stock options.

In other words, chips.

Truth was, I had only the sketchiest notions of what stock options were, and when the CEO started talking about the "strike price," I was lost. But I was undeterred. Cash, salary—I knew that was for suckers. The smart guys were getting stock options and that's what I wanted—even if the job made me miserable. As it did.

12. And not just me

I wasn't alone in my greed or in my ignorance. When CIOs went job hunting during the height of the Internet boom, according to Phil Schneidermeyer, CIO practice leader at Highland Partners, an executive recruiting company, they regularly "traded cash for equity." That is, they accepted smaller salaries in return for stock options. They were, as Schneidermeyer phrases it, "betting on the come," which, as any good poker player knows, is a good way to go bust.

The point is, money, in the form of salary, had become devalued during the boom—especially by those who thought of money as a metric, a way to benchmark their success against their peers.

Today, however, "base compensation has returned to its normal place in the hierarchy of importance," says Schneidermeyer.

In other words, cash has returned to its throne.

13. Folk wisdom

"With money in your pocket, you are wise, and you are handsome, and you sing well too."
–Jewish proverb

14. So what do we really think about money?

Culturally, we are profoundly ambivalent toward money. We deprecate it, yet we assume everyone is out for it. This makes us anxious. Essayist, aphorist and turn-of-the-century businessman Elbert Hubbard once wrote: "When a fellow says, 'It ain't the money, but the principle of the thing,' it's the money." Most of us agree with Hubbard. And even though the Bible tells us that it's easier for a camel to get through the eye of a needle than it is for a rich man to get into heaven, that doesn't seem to have discouraged very many people from trying to get rich.

Indeed, the wild popularity of TV's *The Apprentice* may be due to the relaxing fact that neither the contestants nor Donald Trump are the least bit conflicted about money. Their greed is proudly, unabashedly naked.

15. What John, Paul, George and Ringo thought

"Money can't buy me love."
–The Beatles

16. What another celebrity thought

"They say money can't buy happiness, but it can facilitate it. I thoroughly recommend having lots of it to anybody."
–Malcolm Forbes, magazine publisher and art collector (1919–1990)

17. So who's right?

Is there a correlation between money and happiness? After recapitulating scores of surveys and studies, Adrian Furnham and Michael Argyle in *The Psychology of Money* conclude that the answer is yes and no. They say that while "there has been no historical effect of increased national prosperity on happiness," there is evidence that "people are happier if they think they are doing better than other people."

18. Huh?

"Money talks, nobody walks."
–Ad for Dennison Clothiers that aired ad nauseam on New York radio in the 1960s

19. On the transformational power of money

The Dennison Clothiers jingle made, on the surface, very little sense. But, in fact, money does talk. It translates work (what you do) into value (what you're paid). It is a short story that speaks of success (or the lack thereof), accomplishment and ambition. It is a vehicle that transfers the energy of one person's work to another, as when you write a check (your work) to your plumber for his work. Money is a diary that contains a record of your luck, time and effort. It is a database you carry in your wallet.

20. And in conclusion

This from Charles Steinmetz (1865–1923), the inventor of the first alternating current motor: "Money is a stupid measure of achievement, but unfortunately it is the only universal measure we have." CIO

David Rosenbaum (*drosenbaum@cio.com*) is *CIO*'s managing editor.

Transforming Information Technology

Network

Hosting

Voice

Consulting

SAVVIS

www.savvis.net
1-800-SAVVIS-1

© 2004 SAVVIS Communications.
All rights reserved.

Accounting and Finance Resources

BY CAROL ZARROW

EXECUTIVE EDUCATION PROGRAMS

These are nondegree, open-enrollment courses offered by business schools' executive education departments. Such courses, offered around the country, are usually taught several times a year and vary in length from several days to a week or more. The following is a list we compiled of some prestigious programs across the United States.

ARIZONA

Eller College of Business and Public Administration, University of Arizona, Tucson, *Finance for Non-Financial Managers*

CALIFORNIA

The Anderson School, University of California at Los Angeles, *Strategic Financial Decision Making Program*

Haas School of Business, University of California at Berkeley, *Financial Analysis for Non-Financial Executives, Part 1: Profitability, Financial Analysis for Non-Financial Executives; Part 2: Performance Measurement*

Stanford University, Graduate School of Business, Stanford, *Finance and Accounting for the Nonfinancial Executive*

FLORIDA

Office of Executive Education, University of Florida, Gainesville, *Finance and Accounting for Non-Financial Managers*

GEORGIA

Goizueta Business School, Emory University, Atlanta, *Financial Skills for Non-Financial Managers*

J. Mack Robinson College of Business, Georgia State University, Atlanta, *Mini MBA in Finance*

ILLINOIS

Kellogg School of Management, Northwestern University, Evanston, *Finance for Executives*

The University of Chicago Graduate School of Business, *Financial Analysis for Nonfinancial Managers*

INDIANA

Kelley School of Business, Indiana University, Bloomington, *Accounting & Finance for the Non-Financial Manager*

KANSAS

Center for Management Development at Wichita State University, *Fundamentals of Finance & Accounting for the Non-Financial Manager*

MASSACHUSETTS

Harvard Business School, Harvard University, Cambridge, *Finance for Senior Executives*

MIT Sloan School of Management, Cambridge, *Fundamentals of Finance for the Technical Executive*

MICHIGAN

University of Michigan Business School, Ann Arbor, *Finance for the Nonfinancial Manager*

MINNESOTA

Carlson School of Management, University of Minnesota, Minneapolis *Finance for Non-Financial Managers*

NEW HAMPSHIRE

Tuck Executive Education at Dartmouth College, Hanover, *Finance Essentials for Senior Managers*

NEW JERSEY

Center for Management Development, Rutgers University, Piscataway, *Essentials of Finance for Non-Financial Managers, Engineers, Scientists and Technical Professionals*

NEW YORK

Columbia Business School, Columbia University, New York City, *Finance and Accounting for the Nonfinancial Executive*

Johnson Graduate School of Management, Cornell University, Ithaca, *Finance and Accounting for Nonfinancial Managers*

NORTH CAROLINA

The Fuqua School of Business, Duke University, Durham, *Financial Reporting for Non-Financial Managers*

Kenan-Flagler Business School, University of North Carolina at Chapel Hill, *Financial Analysis for Non-financial Managers*

OHIO

Weatherhead School of Management, Case Western Reserve University, Cleveland, *Accounting and Finance for the Non-Financial Manager*

PENNSYLVANIA

The Smeal College of Business Administration, The Pennsylvania State University, University Park, *Understanding Business Through Financial Information*

The Wharton School, University of Pennsylvania, Philadelphia; *Finance and Accounting for the Non-Financial Manager*

TENNESSEE

Owen Graduate School of Management, Vanderbilt University, Nashville, *Finance and Accounting for Non-Financial Managers*

TEXAS

McCombs School of Business, The University of Texas at Austin, *Accounting and Finance for Non-Financial Managers*

Jesse H. Jones Graduate School of Management, Rice University, Houston, *Finance and Accounting for Executives*

VIRGINIA

Darden Graduate School of Business Administration, University of Virginia, Charlottesville, *Financial Management for Non-Financial Managers*

WISCONSIN

School of Business, University of Wisconsin—Madison, *Finance and Accounting for Nonfinancial Executives*

RULES-SETTING ORGANIZATIONS

These boards and associations develop and enforce the standards that govern financial accounting, reporting and auditing. They also provide professional guidance and educational opportunities for practitioners.

American Institute of Certified Public Accountants

The U.S. standards-setting group for CPAs on accounting standards and financial reporting. It's also an advocacy group before government regulators.

Association for Financial Professionals

This group provides certification for finance and treasury professionals on subjects such as risk management and corporate governance. It's also an advocacy group for its members with government regulators.

Financial Accounting Standards Board

FASB sets standards for financial accounting and reporting for auditors, issuers of financial instruments and the public.

Information Systems Audit and Control Association

A professional group for IT governance that offers two certifications: The Certified Information Systems Auditor exam measures capabilities in the area of IS auditing, control and security; and the Certified Information Security Manager credential validates the capabilities of those who manage, design, oversee and assess an enterprise's information security.

International Accounting Standards Board

This 14-member board, based in London, is working on a single set of global accounting standards in cooperation with national authorities around the world.

IT Financial Management Association

A group dedicated to the education and advancement of financial management for IT organizations; improving IT financial management policies and procedures; and the professional development of its members.

Public Company Accounting Oversight Board

A private-sector, nonprofit corporation created by the Sarbanes-Oxley Act of 2002 to oversee the auditors of public companies. Seeks to further the pubiic interest in the preparation of informative, fair and independent audit reports.

U.S. Securities and Exchange Commission

Five-member commission appointed by the president to maintain the integrity of the securities markets. Commissioners interpret and enforce federal securities laws, amend existing rules and propose new rules. Repository of documents filed by publicly held companies.

BOOKS

Newcomers to finance and accounting will find that these books cover the basics.

Bach, David.
1001 Financial Words You Need to Know: The Ultimate Guide to the Language of Business and Finance.
Oxford University Press, 2003.

Brookson, Stephen.
Managing Budgets.
Essential Managers series.
DK Publishing, 2000.

Cooke, Robert A.
The McGraw-Hill 36-Hour Course in Finance for Nonfinancial Managers, second edition.
McGraw-Hill, 2004.

Fields, Edward.
The Essentials of Finance and Accounting for Non-financial Managers.
Amacom, 2002.

Green, Scott.
Manager's Guide to the Sarbanes-Oxley Act: Improving Internal Controls to Prevent Fraud.
John Wiley & Sons, 2004.

Haber, Jeffry R.
Accounting Demystified.
Amacom, 2003.

Hussein, Mohammed.
Tracking & Controlling Costs: 25 Keys to Cost Management.
The New York Times Pocket MBA series.
Lebhar-Friedman Books, 1999.

Moore, Norman.
Forecasting Budgets: 25 Keys to Successful Planning.
The New York Times Pocket MBA series.
Lebhar-Friedman Books, 1999.

Press, Eric.
Analyzing Financial Statements: 25 Keys to Understanding the Numbers.
The New York Times Pocket MBA series.
Lebhar-Friedman Books, 1999.

Rachlin, Robert.
Total Business Budgeting: A Step-by-Step Guide with Forms, second edition.
John Wiley & Sons, 1999.

Rachlin, Robert and Allen Sweeney.
Accounting and Financial Fundamentals for NonFinancial Executives, second edition.
Amacom, 1996.

Remenyi, Dan.
IT Investment: Making a Business Case.
Butterworth-Heinemann, 1999.

Shim, Jae K.
Accounting and Finance for the Nonfinancial Executive: An Integrated Resource Management Guide for the 21st Century.
Saint Lucie Press, 2000.

Shim, Jae K.
Budgeting Basics & Beyond: A Complete Step-by-Step Guide for Nonfinancial Managers.
Prentice Hall Press, 1994.

Tracy, John A.
How to Read a Financial Report: Wringing Vital Signs Out of the Numbers, sixth edition.
John Wiley & Sons, 2004

ONLINE DICTIONARIES AND GUIDES

ACCOUNTING TERMINOLOGY GUIDE

www.nysscpa.org/prof_library/guide.htm

A glossary compiled by the New York State Society of CPAs.

BLOOMBERG FINANCIAL GLOSSARY

www.bloomberg.com/analysis/glossary/bfglosa.htm

The editors at Bloomberg.com amassed definitions for more than 6,000 financial terms.

BUSINESS ETHICS

www.web-miner.com/busethics.htm

A continuously updated business ethics bibliography, with links to articles and publications, case studies, corporate codes of ethics, professional organizations and other resources.

ECONOMIST.COM BUSINESS ENCYCLOPEDIA DICTIONARY

www.economist.com/encyclopedia/Dictionary.cfm

A searchable, browsable dictionary covering accounting, banking, e-commerce, economics, finance, general management, HR and personnel, marketing, operations and production and statistics terminology.

ECONOMIST.COM BUSINESS ENCYCLOPEDIA PRACTICAL GUIDE TO FINANCE

www.economist.com/encyclopedia/Articles.cfm?section=975278&catid=975289&type=action

A how-to guide, with British and U.S. versions, focused on individual financial tasks, such as accounting for research and development and calculating a debt-to-equity ratio.

ELECTRONIC STATISTICS TEXTBOOK

www.statsoft.com/textbook/stathome.htm

A downloadable, full-text statistics textbook from the StatSoft software company that covers both basic and complex concepts of statistics.

IBM GUIDE TO FINANCIALS

www.ibm.com/investor/financialguide/

A basic introduction put together by IBM for people with little experience reading financial statements and annual reports.

QUICKMBA

www.quickmba.com

A list of resources and guides on the topics typically covered in MBA programs. The information for each topic is provided by a short tutorial or from a link to an educational source.

VENTURELINE MBA GLOSSARY

www.ventureline.com/glossary.asp

VentureLine touts its MBA Glossary as "the Web's most complete accounting dictionary of accounting terms."

Want More Information?

Visit our website for *CIO*'s Money Issue at **www.cio.com/money**. There, you'll find links to executive education programs around the country and the rules-setting bodies mentioned here; as well as related articles and information from *CIO* magazine's archives.

cio.com

Sales and Services

CIO SALES OFFICES

President and CEO
Walter Manninen • 508 935-4101

Publisher Gary J. Beach • 508 935-4202

Executive VP Sales/Custom Publishing
Ellen Romanow • 508 935-4796

East Coast

Senior Vice President, Sales and Integrated Solutions/East
Joan Kelly • 508 935-4586

Regional Sales Director
Kathy Powers • 201 634-2331

Regional Sales Manager
Ellie Schwab • 201 634-2332

Senior Account Executive
Andrew Haney • 508 988-7863
Fax • 508 879-6063

Account Executive
Joan Bonadeo • 201 634-2328

Advertising Sales Associate
Rhonda Goodman • 201 634-2329
Fax • 201 634-9513

New England

Senior Vice President, Sales and Integrated Solutions/East
Joan Kelly • 508 935-4586

Account Executive
Dawn Cora • 508 935-4092
Fax • 508 879-6063

South Central

Regional Director/Advertising Sales
Robert E. Sawdon • 512 306-9801

Account Executive
Brenda Garza • 512 306-9801
Fax • 512 306-9805

North Central

Senior District Sales Manager
Beth DeVillez • 847 759-2727

Advertising Sales Associate
Kim Giovanni • 847 759-2728
Fax • 847 759-2729

West Coast

Senior Regional Sales Managers
Ai Collins • 415 975-2686
Jane Evans • 415 975-2680

Regional Sales Manager
Kevin Ebmeyer • 415 975-2684

Account Executive
Derek Jung • 415 975-2683
Fax • 415 543-2358

Southern California

Regional Sales Manager
Kevin Ebmeyer • 415 975-2684

LIST SERVICES

List Services Director
Kathryn A.W. Marston • 508 935-4072

List Services Account Executive
Stephanie Roy • 508 935-4151

ONLINE SERVICES

VP/Online Sales
Lisa Brown • 508 935-4470

Online Sales Manager
Michael McPhee • 508 935-4611

CUSTOM PUBLISHING

Group Director
Michael Siggins • 508 988-6763

Director Mary Gregory • 508 988-6765

Director of Content Development • Tom Field

Project Managers • John Danielowich, Amy Greenleaf, Kristen Waelde

REPRINT SERVICES

For article reprints (500 quantity or more), please contact Monica Hesse at RSiCopyright (651 582-3845) or via e-mail at *cioreprints@rsicopyright.com*.

CIO IS PUBLISHED IN THE UNITED STATES AS WELL AS IN:

Australia, CIO Australia *www.idg.com.au*
Canada, CIO Canada *www.lti.on.ca/cio*
China, CEO & CIO China *www.ceocio.com.cn*
France, CIO France *www.idg.fr/cio*
Germany, CIO Germany *www.cio.de*
India, CIO India 91-80-521-0309/12
Japan, CIO Japan *www.idg.co.jp*
The Netherlands, CIO Netherlands *www.cio.nl*
New Zealand, CIO New Zealand *www.idg.co.nz*
Norway, CIO Business Standard *www.business-standard.no*
Poland, CXO Poland *www.cxo.pl*
Singapore, CIO ACEN/Hong-Kong *www.idg.com.sg*
South Korea, CIO Korea *www.cio.seoul.kr*
Sweden, CIO Sweden *www.cio.idg.se*

For further sales information, visit www2.cio.com/marketing/aboutcio/contacts.cfm.

CIO Contact Information

Editorial, Advertising and Business Offices: 492 Old Connecticut Path, P.O. Box 9208, Framingham, MA 01701-9208, 508 872-0080.

***CIO* (ISSN 0894-9301) is published semimonthly and as a combined issue Dec. 15/Jan. 1, plus a special issue, by CXO Media Inc., 492 Old Connecticut Path, P.O. Box 9208, Framingham, MA 01701-9208. Periodicals postage paid at Framingham, MA, and at additional mailing offices. Canada Publications Mail Agreement Number 1902075. CANADIAN POSTMASTER: Please return undeliverable copy to P.O. Box 1632, Windsor, ON N9A 7C9.**

Permissions: Copyright 2004 by CXO Media Inc. All rights reserved. Reproduction of material appearing in *CIO* is forbidden without written permission. Send all requests to Permissions Department, *CIO*, 492 Old Connecticut Path, P.O. Box 9208, Framingham, MA 01701-9208.

Photocopy Rights: Permission to photocopy for internal or personal use or the internal or personal use of specific clients is granted by *CIO* for users through the Copyright Clearance Center, provided that the base fee of $3 per copy of the article, plus $.50 per page is paid directly to Copyright Clearance Center, 27 Congress Street, Salem, MA 01970. Please specify: ISSN 0894-9301. Permission to photocopy does not extend to contributed articles followed by this symbol: ‡.

Subscriptions: *CIO* is free to qualified information executives. To apply, use our online subscription form at www.subscribe.cio.com. Subscriptions are also available on a paid basis at a rate of $95 for the United States and Canada, $195 for international (payable in U.S. funds only) and may be ordered online at www.subscribe.cio.com/services.html. Or address inquiries to *CIO*, P.O. Box 489, Northbrook, IL 60065-0489; 866 354-1125. Please allow four to six weeks for a new subscription to begin. The single copy price is $9 for the United States and Canada, and $15 international. Prepayment is required, payable in U.S. funds.

Change of Address: Please go to www.omeda.com/custsrv/cio and follow the online instructions.

Postmaster: Send change of address to *CIO*, P.O. Box 489, Northbrook, IL 60065-9816. Printed in the U.S.A.

Index of Companies and Advertisers

Page numbers refer to the first page of the article(s) in which the company has a substantial mention. This index is provided as a service to readers. The publisher does not assume any liability for errors or omissions.

COMPANY INDEX

A.G. Edwards Inc. 50
American Airlines Inc. . . 15, 22
Ameristar Casinos Inc. 22
Combined Insurance Company of America 15
Credit Suisse First Boston LLC 50
Eagle's Flight, Creative Training Excellence Inc. 15
Farmers Insurance Group . . 38
Gartner Inc. 38
General Motors Corp. 15
Heidrick & Struggles International Inc. 56
Highland Partners 56
Lehman Brothers Holdings Inc. 50
Mannington Mills Inc. 15
Mattel Inc. 50
Meta Group Inc. 15, 22
Morgan Stanley 50
Parker/Hunter Inc. 50
Pierce Transit 22
Piper Jaffray Cos. 50
PNC Financial Services Group Inc., The 38
Procter & Gamble 22
Salomon Smith Barney 50
Seton Co. 22
UBS AG 50
Verizon Communications Inc. 50
Viper Motorcycle Co. 15

ADVERTISER INDEX

American Power Conversion 17, 20
Cisco Systems Inc. C2
Computer Associates Intl. Inc. C4
Dell Inc. 2
Fujitsu Computer Systems Corp. 19, 37
IBM Corp. 8
Lionbridge Technologies Inc. . . 12
Modis C3
Novell Inc. 26
Oracle Corp. 5
Project Management Leadership Group 14
Quest Software 7
SAVVIS Communications . . 59
Sprint 63
Verdasys 11
Veritas 49

> With Sprint, Geek Squad at Best Buy is beautiful.

Sprint®

Geek Squad,® a 24-Hour Computer Support Task Force found at Best Buy, depends on Sprint to take care of business. Armed with Sprint PCS Ready Link℠ Phones, Agents can stay linked with walkie-talkie-style communication. And when they need more detailed technical information, Sprint PCS Connection Cards™ provide high-speed wireless access, linking them to their company intranet, which can provide the same data access they'd have in the office. Sprint technology helps Geek Squad expedite solutions, improve customer service and efficiently handle over a thousand customers a day. And a fast, connected Geek Squad is, in our opinion, beautiful. **With Sprint, business is beautiful.**℠

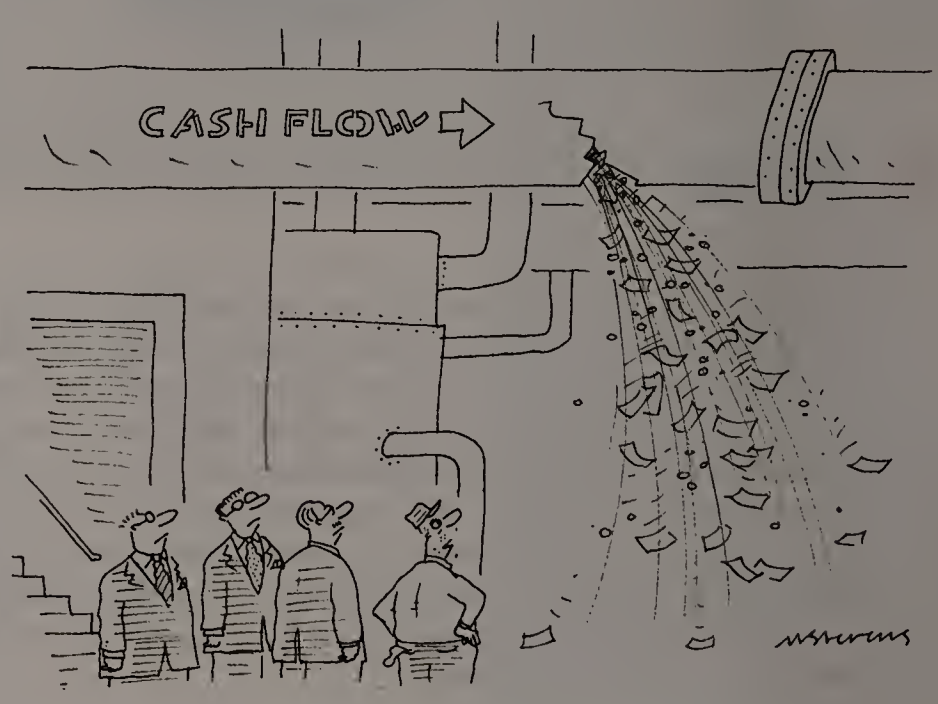
> Visit Sprint.com/beautiful for case studies or call 877-777-5568 >

©2004 Sprint. All rights reserved. Sprint and the diamond logo are trademarks of Sprint Communications Company L.P. BEST BUY, its yellow tag design and GEEK SQUAD are trademarks of Best Buy Enterprise Services, Inc.

Funny Money

"These projected figures are a figment of our imagination. We hope you like them."

"We are neither hunters nor gatherers. We are accountants."



"Well, Gentlemen, there's your problem."

ILLUSTRATIONS BY CARTOONBANK.COM

Get Your First Week Free!

Visit www.modisit.com/freeweek

* Certain restrictions apply. Ask your local office for details.

Another missed ball game? Maybe it's because your IT workload keeps growing while your resources don't. You need Modis. We can deploy the technology talent you need to meet all your IT goals with the right mix of internal staff, outside consulting services and project outsourcing. In fact, we guarantee it through our groundbreaking Guaranteed Delivery Program. So call us. Modis delivers. Play ball.

mōdis®

delivers

877-MODISIT • www.modisit.com

Staff Augmentation · Direct Placement · Project Management

A Member of the MPS Group MPS LISTED NYSE

The right software can help today's CIO become tomorrow's corporate leader.

It's amazing what the right software can do in the right hands. Just ask the CIOs taking advantage of our management software for utility computing. They've transformed previously complex disparate infrastructures into integrated springboards for business success. And they've capitalized on tomorrow's trends while heading off today's problems, all while maximizing their existing resources. To learn how management software can benefit your business, not to mention your career, go to ca.com/management3.

ca

Computer Associates®

© 2003 Computer Associates International, Inc. (CA). All rights reserved.